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<212> PRT
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<220>
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<223> Signal Peptide
<220>
<221> misc feature

<213> Homo sapiens

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<222> 36-47, 108-113, 166-171,198-203, 207-212
<223> N-myristoylation Sites.
<220>
<221> misc feature
<222> 39-42
<223> Glycosaminoglycan Attachment Site.
<220>
<221> TRANSMEM
<222> 136-152
<223> Transmembrane Domain
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<221> misc_feature
<222> 161-\overline{1}63, 187-190 and 253-256
<223> N-glycosylation Sites.
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 Trp Thr Arg Lys Gly Lys Leu Lys Ile Glu Asp Ile Thr Asp Lys
 Tyr Ile Phe Ile Thr Gly Cys Asp Ser Gly Phe Gly Asn Leu Ala
Ala Arg Thr Phe Asp Lys Lys Gly Phe His Val Ile Ala Ala Cys
Leu Thr Glu Ser Gly Ser Thr Ala Leu Lys Ala Glu Thr Ser Glu
Arg Leu Arg Thr Val Leu Leu Asp Val Thr Asp Pro Glu Asn Val
Lys Arg Thr Ala Gln Trp Val Lys Asn Gln Val Gly Glu Lys Gly
Leu Trp Gly Leu Ile Asn Asn Ala Gly Val Pro Gly Val Leu Ala
                 110
 Pro Thr Asp Trp Leu Thr Leu Glu Asp Tyr Arg Glu Pro Ile Glu
                 125
Val Asn Leu Phe Gly Leu Ile Ser Val Thr Leu Asn Met Leu Pro
                 140
Leu Val Lys Lys Ala Gln Gly Arg Val Ile Asn Val Ser Ser Val
                 155
                                     160
Gly Gly Arg Leu Ala Ile Val Gly Gly Tyr Thr Pro Ser Lys
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Tyr Ala Val Glu Gly Phe Asn Asp Ser Leu Arg Arg Asp Met Lys
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                 185
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AND THE MENTERS IN THE

Ala Phe Gly Val His Val Ser Cys Ile Glu Pro Gly Leu Phe Lys Thr Asn Leu Ala Asp Pro Val Lys Val Ile Glu Lys Lys Leu Ala 215 Ile Trp Glu Gln Leu Ser Pro Asp Ile Lys Gln Gln Tyr Gly Glu Gly Tyr Ile Glu Lys Ser Leu Asp Lys Leu Lys Gly Asn Lys Ser Tyr Val Asn Met Asp Leu Ser Pro Val Val Glu Cys Met Asp His 260 270 Ala Leu Thr Ser Leu Phe Pro Lys Thr His Tyr Ala Ala Gly Lys 275 280 Asp Ala Lys Ile Phe Trp Ile Pro Leu Ser His Met Pro Ala Ala 290 300 Leu Gln Asp Phe Leu Leu Lys Gln Lys Ala Glu Leu Ala Asn 305 315

Pro Lys Ala Val

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(213) Home Ba

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gccgcctcat cgggacttca tctcggtgac gctgagcttt ggcgagagct 200
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caactgtcga gattgcagcg gaatatgatt ctcttcctcc ttgcctttct 300
gcttttctgt ggactcctct tctacatcaa cttggctgac cattggaaag 350
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gageggtgat egageetgag eagggeaceg ageteeette aagaagagea 700 gaagtgccca ccaagcctcc cctgccaccg gccaggacac agggcacacc 750 agtgcatctg aactatcgcc agaagggcgt gattgacgtc ttcctgcatg 800 catggaaagg ataccgcaag tttgcatggg gccatgacga gctgaagcct 850 gtgtccaggt ccttcagtga gtggtttggc ctcggtctca cactgatcga 900 cgcgctggac accatgtgga tcttgggtct gaggaaagaa tttgaggaag 950 ccaggaagtg ggtgtcgaag aagttacact ttgaaaagga cgtggacgtc 1000 aacctgtttg agagcacgat ccgcatcctg ggggggctcc tgagtgccta 1050 ccacctgtct ggggacagcc tcttcctgag gaaagctgag gattttggaa 1100 atcggctaat gcctgccttc agaacaccat ccaagattcc ttactcggat 1150 gtgaacatcg gtactggagt tgcccacccg ccacggtgga cctccgacag 1200 cactgtggcc gaggtgacca gcattcagct ggagttccgg gagctctccc 1250 gtctcacagg ggataagaag tttcaggagg cagtggagaa ggtgacacag 1300 cacatccacg gcctgtctgg gaagaaggat gggctggtgc ccatgttcat 1350 caatacccac agtggcctct tcacccacct gggcgtattc acgctgggcg 1400 ccagggccga cagctactat gagtacctgc tgaagcagtg gatccagggc 1450 gggaagcagg agacacagct gctggaagac tacgtggaag ccatcgaggg 1500 tgtcagaacg cacctgctgc ggcactccga gcccagtaag ctcacctttg 1550 tgggggaget tgcccacggc cgcttcagtg ccaagatgga ccacctggtg 1600 tgcttcctgc cagggacgct ggctctgggc gtctaccacg gcctgcccgc 1650 cagccacatg gagctggccc aggagctcat ggagacttgt taccagatga 1700 accggcagat ggagacgggg ctgagtcccg agatcgtgca cttcaacctt 1750 tacccccagc cgggccgtcg ggacgtggag gtcaagccag cagacaggca 1800 caacctgctg cggccagaga ccgtggagag cctgttctac ctgtaccgcg 1850 tcacagggga ccgcaaatac caggactggg gctgggagat tctgcagagc 1900 ttcagccgat tcacacgggt cccctcgggt ggctattctt ccatcaacaa 1950 tgtccaggat cctcagaagc ccgagcctag ggacaagatg gagagcttct 2000 tcctggggga gacgctcaag tatctgttct tgctcttctc cgatgaccca 2050 aacctgctca gcctggacgc ctacgtgttc aacaccgaag cccaccctct 2100

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Val Ala Thr Thr Val Val Met Tyr Pro Pro Pro Pro Pro Pro Pro 35 40 45

His Arg Asp Phe Ile Ser Val Thr Leu Ser Phe Gly Glu Ser Tyr 50 55 60

Asp Asn Ser Lys Ser Trp Arg Arg Arg Ser Cys Trp Arg Lys Trp 65 70 75

Lys Gln Leu Ser Arg Leu Gln Arg Asn Met Ile Leu Phe Leu Leu 80 85 90

Ala Phe Leu Leu Phe Cys Gly Leu Leu Phe Tyr Ile Asn Leu Ala 95 100 105

ricing program

<211> 699

<212> PRT

<213> Homo sapiens

<221> TRANSMEM

<222> 21-40 and 84-105

<223> Transmembrane Domain (type II)

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Met	Arg	Pro	Glu	Ile 125	Ala	Gly	Leu	Lys	Pro 130	Ala	Asn	Pro	Pro	Val 135
Leu	Pro	Ala	Pro	Gln 140	Lys	Ala	Asp	Thr	Asp 145	Pro	Glu	Asn	Leu	Pro 150
Glu	Ile	Ser	Ser	Gln 155	Lys	Thr	Gln	Arg	His 160	Ile	Gln	Arg	Gly	Pro 165
Pro	His	Leu	Gln	Ile 170	Arg	Pro	Pro	Ser	Gln 175	Asp	Leu	Lys	Asp	Gly 180
Thr	Gln	Glu	Glu	Ala 185	Thr	Lys	Arg	Gln	Glu 190	Ala	Pro	۷al	Asp	Pro 195
Arg	Pro	Glu	Gly	Asp 200	Pro	Gln	Arg	Thr	Val 205	Ile	Ser	Trp	Arg	Gly 210
Ala	Val	Ile	Glu	Pro 215	Glu	Gln	Gly	Thr	Glu 220	Leu	Pro	Ser	Arg	Arg 225
Ala	Glu	Val	Pro	Thr 230	Lys	Pro	Pro	Leu	Pro 235	Pro	Ala	Arg	Thr	Gln 240
Gly	Thr	Pro	Val	His 245	Leu	Asn	Tyr	Arg	Gln 250	Lys	Gly	Val	Ile	Asp 255
Val	Phe	Leu	His	Ala 260	Trp	Lys	Gly	Tyr	Arg 265	Lys	Phe	Ala	Trp	Gly 270
His	Asp	Glu	Leu	Lys 275	Pro	Val	Ser	Arg	Ser 280	Phe	Ser	Glu	Trp	Phe 285
Gly	Leu	Gly	Leu	Thr 290	Leu	Ile	Asp	Ala	Leu 295	Asp	Thr	Met	Trp	Ile 300
Leu	Gly	Leu	Arg	Lys 305	Glu	Phe	Glu	Glu	Ala 310	Arg	Lys	Trp	Val	Ser 315
Lys	Lys	Leu	His	Phe 320	Glu	Lys	Asp	Val	Asp 325	Val	Asn	Leu	Phe	Glu 330
Ser	Thr	Ile	Arg	Ile 335	Leu	Gly	Gly	Leu	Leu 340	Ser	Ala	Tyr	His	Leu 345
Ser	Gly	Asp	Ser	Leu 350	Phe	Leu	Arg	Lys	Ala 355	Glu	Asp	Phe	Gly	Asn 360
Arg	Leu	Met	Pro	Ala 365	Phe	Arg	Thr	Pro	Ser 370	Lys	Ile	Pro	Tyr	Ser 375
Asp	Val	Asn	Ile	Gly 380	Thr	Gly	Val	Ala	His 385	Pro	Pro	Arg	Trp	Thr 390
Ser	Asp	Ser	Thr	Val	Ala	Glu	Val	Thr	Ser	Ile	Gln	Leu	Glu	Phe

india ii

				395					400					405
Arg	Glu	Leu	Ser	Arg 410	Leu	Thr	Gly	Asp	Lys 415	Lys	Phe	Gln	Glu	Ala 420
Val	Glu	Lys	Val	Thr 425	Gln	His	Ile	His	Gly 430	Leu	Ser	Gly	Lys	Lys 435
Asp	Gly	Leu	Val	Pro 440	Met	Phe	Ile	Asn	Thr 445	His	Ser	Gly	Leu	Phe 450
Thr	His	Leu	Gly	Val 455	Phe	Thr	Leu	Gly	Ala 460	Arg	Ala	Asp	Ser	Туг 465
Tyr	Glu	Tyr	Leu	Leu 470	Lys	Gln	Trp	Ile	Gln 475	Gly	Gly	Lys	Gln	Glu 480
Thr	Gln	Leu	Leu	Glu 485	Asp	Tyr	Val	Glu	Ala 490	Ile	Glu	Gly	Val	Arg 495
Thr	His	Leu	Leu	Arg 500	His	Ser	Glu	Pro	Ser 505	Lys	Leu	Thr	Phe	Val 510
Gly	Glu	Leu	Ala	His 515	Gly	Arg	Phe	Ser	Ala 520	Lys	Met	Asp	His	Leu 525
Val	Cys	Phe	Leu	Pro 530	Gly	Thr	Leu	Ala	Leu 535	Gly	Val	Tyr	His	Gly 540
Leu	Pro	Ala	Ser	His 545	Met	Glu	Leu	Ala	Gln 550	Glu	Leu	Met	Glu	Thr 555
Cys	Tyr	Gln	Met	Asn 560	Arg	Gln	Met	Glu	Thr 565	Gly	Leu	Ser	Pro	Glu 570
Ile	Val	His	Phe	Asn 575	Leu	Tyr	Pro	Gln	Pro 580	Gly	Arg	Arg	Asp	Val 585
Glu	Val	Lys	Pro	Ala 590	Asp	Arg	His	Asn	Leu 595	Leu	Arg	Pro	Glu	Thr 600
Val	Glu	Ser	Leu	Phe 605	Tyr	Leu	Tyr	Arg	Val 610	Thr	Gly	Asp	Arg	Lys 615
Tyr	Gln	Asp	Trp	Gly 620	Trp	Glu	Ile	Leu	Gln 625	Ser	Phe	Ser	Arg	Phe 630
Thr	Arg	Val	Pro	Ser 635	Gly	Gly	Tyr	Ser	Ser 640	Ile	Asn	Asn	Val	Gln 645
Asp	Pro	Gln	Lys	Pro 650	Glu	Pro	Arg	Asp	Lys 655	Met	Glu	Ser	Phe	Phe 660
Leu	Gly	Glu	Thr	Leu 665	Lys	Tyr	Leu	Phe	Leu 670	Leu	Phe	Ser	Asp	Asp 675
Pro	Asn	Leu	Leu	Ser 680	Leu	Asp	Ala	Tyr	Val 685	Phe	Asn	Thr	Glu	Ala 690

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<222> 1-24
<223> Synthetic construct.
<400> 14
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<210> 15
<211> 44
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<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-44
<223> Synthetic construct.
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<210> 16
<211> 1524
<212> DNA
<213> Homo sapiens
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 ccctcggaag tgttccgtct tccacctgtt cgtggcctgc ctctcgctgg 200
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gettettete cetaetetgg etgeagetea getgetetgg ggaegtggee 250

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cccccagag ccgcccctg agcactggga agaagacgca tcctggggcc 350
eccacegeet ggeagtgetg gtgeeettee gegaaegett egaggagete 400
ctggtcttcg tgccccacat gcgccgcttc ctgagcagga agaagatccg 450
gcaccacatc tacgtgctca accaggtgga ccacttcagg ttcaaccggg 500
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11710 - 700

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<211> 327

<212> PRT

<213> Homo sapiens

<220>

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<223> Signal peptide.
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<223> N-myristoylation site.
<220>
<221> misc feature
<222> 27-31
<223> cAMP- and cGMP-dependent protein kinase phosphorylation site.
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<221> TRANSMEM
<222> 29-49
<223> Transmembrane domain (type II).
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<222> 154-158
<223> N-glycosylation site.
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<221> misc_feature
<222> 226-233
<223> Tyrosine kinase phosphorylation site.
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Val Phe His Leu Phe Val Ala Cys Leu Ser Leu Gly Phe Phe Ser
                  35
Leu Leu Trp Leu Gln Leu Ser Cys Ser Gly Asp Val Ala Arg Ala
Val Arg Gly Gln Gly Gln Glu Thr Ser Gly Pro Pro Arg Ala Cys
Pro Pro Glu Pro Pro Pro Glu His Trp Glu Glu Asp Ala Ser Trp
Gly Pro His Arg Leu Ala Val Leu Val Pro Phe Arg Glu Arg Phe
                  95
                                                          105
Glu Glu Leu Leu Val Phe Val Pro His Met Arg Arg Phe Leu Ser
                 110
                                     115
Arg Lys Lys Ile Arg His His Ile Tyr Val Leu Asn Gln Val Asp
                                                          135
                 125
His Phe Arg Phe Asn Arg Ala Ala Leu Ile Asn Val Gly Phe Leu
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Glu	Ser	Ser	Asn	Ser 155	Thr	Asp	Tyr	Ile	Ala 160	Met	His	Asp	Val	Asp 165
Leu	Leu	Pro	Leu	Asn 170	Glu	Glu	Leu	Asp	Tyr 175	Gly	Phe	Pro	Glu	Ala 180
Gly	Pro	Phe	His	Val 185	Ala	Ser	Pro	Glu	Leu 190	His	Pro	Leu	Tyr	His 195
Tyr	Lys	Thr	Tyr	Val 200	Gly	Gly	Ile	Leu	Leu 205	Leu	Ser	Lys	Gln	His 210
Tyr	Arg	Leu	Cys	Asn 215	Gly	Met	Ser	Asn	Arg 220	Phe	Trp	Gly	Trp	Gly 225
Arg	Glu	Asp	Asp	Glu 230	Phe	Tyr	Arg	Arg	Ile 235	Lys	Gly	Ala	Gly	Leu 240
Gln	Leu	Phe	Arg	Pro 245	Ser	Gly	Ile	Thr	Thr 250	Gly	Tyr	Lys	Thr	Phe 255
Arg	His	Leu	His	Asp 260	Pro	Ala	Trp	Arg	Lys 265	Arg	Asp	Gln	Lys	Arg 270
Ile	Ala	Ala	Gln	Lys 275	Gln	Glu	Gln	Phe	Lys 280	Val	Asp	Arg	Glu	Gly 285
Gly	Leu	Asn	Thr	Val 290	Lys	Tyr	His	Val	Ala 295	Ser	Arg	Thr	Ala	Leu 300
Ser	Val	Gly	Gly	Ala 305	Pro	Cys	Thr	Val	Leu 310	Asn	Ile	Met	Leu	Asp 315
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<221> misc_feature
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<223> Growth factor and cytokines receptors family.

<400> 22

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Ala Thr Asp Ala Pro Ile Arg Asp Trp Ala Phe Phe Pro Pro Ser 35 40 45

Phe Leu Cys Leu Pro His Arg Pro Ala Met Thr Cys Ser Gln 50 55 60

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1 11 191

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<211> 616
<212> PRT
<213> Homo sapiens

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<223> Signal peptide.

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<223> Transmembrane domain (type II).
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				380					385					390
Gln	Asp	Glu	Arg	Lys 395	Ala	Trp	Arg	Arg	Cys 400	Asp	Arg	Gly	Gly	Phe 405
Trp	Ala	Asp	Asp	Asp 410	Tyr	Ser	Arg	Cys	Gln 415	Tyr	Ala	Asn	Asp	Val 420
Thr	Arg	Val	Leu	Tyr 425	Met	Phe	Asn	Gln	Met 430	Pro	Leu	Asn	Leu	Thr 435
Asn	Ala	Val	Ala	Thr 440	Ala	Arg	Gln	Leu	Leu 445	Ala	Tyr	Thr	Val	Glu 450
Ala	Ala	Asn	Phe	Ser 455	Asp	Lys	Met	Asp	Val 460	Ile	Phe	Val	Ala	Glu 465
Met	Ile	Glu	Lys	Phe 470	Gly	Arg	Phe	Thr	Lys 475	Glu	Glu	Lys	Ser	Lys 480
Glu	Leu	Gly	Asp	Val 485	Met	Val	Asp	Ile	Ala 490	Ser	Asn	Ile	Met	Leu 495
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Cys	Ser	Arg	Ile	Val 515	Gln	Cys	Leu	Gln	Arg 520	Ile	Ala	Thr	Tyr	Arg 525
Leu	Ala	Gly	Gly	Ala 530	His	Val	Tyr	Ser	Thr 535	Tyr	Ser	Pro	Asn	Ile 540
Ala	Leu	Glu	Ala	Tyr 545	Val	Ile	Lys	Ser	Thr 550	Gly	Phe	Thr	Gly	Met 555
Thr	Cys	Thr	Val	Phe 560	Gln	Lys	Val	Ala	Ala 565	Ser	Asp	Arg	Thr	Gly 570
Leu	Ser	Asp	Tyr	Gly 575	Arg	Arg	Asp	Pro	Glu 580	Gly	Asn	Leu	Asp	Lys 585
Gln	Leu	Ser	Phe	Lys 590	Cys	Asn	Val	Ser	Asn 595	Thr	Phe	Ser	Ser	Leu 600
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<212> DNA
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AND THE DESIGNATION

14 14 710

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<211> 81

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<213> Homo sapiens

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<223> Signal peptide.

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Thr Ala Ala Thr Val Ala Gly Val His Val Lys Gln Gln Trp Asp 20 25 30

Gln Gln Arg Leu Arg Asp Gly Val Ile Arg Asp Ile Glu Arg Gln 35 40 45

Ile Arg Lys Lys Glu Asn Ile Arg Leu Leu Gly Glu Gln Ile Ile 50 55 60

Leu Thr Glu Gln Leu Glu Ala Glu Arg Glu Lys Met Leu Leu Ala 65 70 75

Lys Gly Ser Gln Lys Ser 80

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<211> 2128

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<213> Homo sapiens

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rņ.

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<210> 31

<211> 322

<212> PRT

<213> Homo sapiens

<400> 31

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Ser Ser Ser Gly Leu Gly Ser Pro Met Ile Val Gly Ser Pro Arg 20 25 30

Ala Leu Thr Gln Pro Leu Gly Leu Leu Arg Leu Leu Gln Leu Val
35 40 45

Ser Thr Cys Val Ala Phe Ser Leu Val Ala Ser Val Gly Ala Trp
50 55 60

Thr Gly Ser Met Gly Asn Trp Ser Met Phe Thr Trp Cys Phe Cys
65 70 75

Phe Ser Val Thr Leu Ile Ile Leu Ile Val Glu Leu Cys Gly Leu 80 85 90

Gln Ala Arg Phe Pro Leu Ser Trp Arg Asn Phe Pro Ile Thr Phe 95 100 105

Ala Cys Tyr Ala Ala Leu Phe Cys Leu Ser Ala Ser Ile Ile Tyr 110 115 120

Pro Thr Thr Tyr Val Gln Phe Leu Ser His Gly Arg Ser Arg Asp 125 130 135

His Ala Ile Ala Ala Thr Phe Phe Ser Cys Ile Ala Cys Val Ala 140 145 150

Tyr Ala Thr Glu Val Ala Trp Thr Arg Ala Arg Pro Gly Glu Ile 155 160 165

Thr Gly Tyr Met Ala Thr Val Pro Gly Leu Leu Lys Val Leu Glu 170 175 180

Thr Phe Val Ala Cys Ile Ile Phe Ala Phe Ile Ser Asp Pro Asn 185 190 195

Leu Tyr Gln His Gln Pro Ala Leu Glu Trp Cys Val Ala Val Tyr $200 \hspace{1cm} 205 \hspace{1cm} 210 \hspace{1cm}$

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Gly Glu Cys Thr Asn Val Leu Pro Ile Pro Phe Pro Ser Phe Leu
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Ser Gly Leu Ala Leu Leu Ser Val Leu Leu Tyr Ala Thr Ala Leu
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Val Leu Trp Pro Leu Tyr Gln Phe Asp Glu Lys Tyr Gly Gly Gln
                260
Pro Arg Arg Ser Arg Asp Val Ser Cys Ser Arg Ser His Ala Tyr
                                     280
                275
Tyr Val Cys Ala Trp Asp Arg Arg Leu Ala Val Ala Ile Leu Thr
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                290
Ala Ile Asn Leu Leu Ala Tyr Val Ala Asp Leu Val His Ser Ala
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His Leu Val Phe Val Lys Val
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320

<210> 32 <211> 3680 <212> DNA <213> Homo sapiens

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DESCRIPTION OF PERSONS ASSESSMENT

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<211> 335

<212> PRT

<213> Homo sapiens

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Phe Gly Thr Val Ser Cys Glu Tyr Met Leu Gly Ser Pro Leu Ser 20 25 30

Ser Leu Ala Gln Val Asn Leu Ser Pro Phe Ser His Pro Lys Val
35 40 45

His Met Asp Pro Asn Tyr Cys His Pro Ser Thr Ser Leu His Leu 50 55 60

Cys Ser Leu Ala Trp Ser Phe Thr Arg Leu Leu His Pro Pro Leu 65 70 75

Ser Pro Gly Ile Ser Gln Val Val Lys Asp His Val Thr Lys Pro 80 85 90

Thr Ala Met Ala Gln Gly Arg Val Ala His Leu Ile Glu Trp Lys $95 \hspace{1.5cm} 100 \hspace{1.5cm} 105$

Gly Trp Ser Lys Pro Ser Asp Ser Pro Ala Ala Leu Glu Ser Ala 110 115 120

Phe Ser Ser Tyr Ser Asp Leu Ser Glu Gly Glu Gln Glu Ala Arg 125 130 135

Phe Ala Ala Gly Val Ala Glu Gln Phe Ala Ile Ala Glu Ala Lys 140 145 150

Leu Arg Ala Trp Ser Ser Val Asp Gly Glu Asp Ser Thr Asp Asp 155 160 165

Ser Tyr Asp Glu Asp Phe Ala Gly Gly Met Asp Thr Asp Met Ala $170 \hspace{1.5cm} 175 \hspace{1.5cm} 180 \hspace{1.5cm}$

Gly Gln Leu Pro Leu Gly Pro His Leu Gln Asp Leu Phe Thr Gly
185 190 195

His Arg Phe Ser Arg Pro Val Arg Gln Gly Ser Val Glu Pro Glu 200 205 210

Ser Asp Cys Ser Gln Thr Val Ser Pro Asp Thr Leu Cys Ser Ser 215 220 225

Leu Cys Ser Leu Glu Asp Gly Leu Leu Gly Ser Pro Ala Arg Leu 230 235 240

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Ala Ser Gln Leu Leu Gly Asp Glu Leu Leu Leu Ala Lys Leu Pro
 Pro Ser Arg Glu Ser Ala Phe Arg Ser Leu Gly Pro Leu Glu Ala
 Gln Asp Ser Leu Tyr Asn Ser Pro Leu Thr Glu Ser Cys Leu Ser
                  275
                                      280
 Pro Ala Glu Glu Pro Ala Pro Cys Lys Asp Cys Gln Pro Leu
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 Cys Pro Pro Leu Thr Gly Ser Trp Glu Arg Gln Arg Gln Ala Ser
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                                      310
 Asp Leu Ala Ser Ser Gly Val Val Ser Leu Asp Glu Asp Glu Ala
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 Glu Pro Glu Glu Gln
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<222> 1-23
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<210> 38
<211> 39
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ccatctgttt tctctaatgc acgacagatt cctttcagac aggacaactg 150
tgatatttca gttcctgatt gtaaatacct cctaagcctg aagcttctgt 200
tactagccat tgtgagcttc agtttcttca tctgcaaaat gggcataata 250
caatctattc ttgccacatc aagggattgt tattccttta aaaaaaaacc 300
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11 1 1

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F[0:15]

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<211> 334

<212> PRT

<213> Homo sapiens

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Ser Leu Leu Ser Gly Ser His Gly Lys Glu Asn Gln Asp Ile Asn 20 25 30

Thr Thr Gln Asn Ile Ala Glu Val Phe Lys Thr Met Glu Asn Lys 35 40 45

Pro Ile Ser Leu Glu Ser Glu Ala Asn Leu Asn Ser Asp Lys Glu
50 55 60

Asn Ile Thr Thr Ser Asn Leu Lys Ala Ser His Ser Pro Pro Leu 65 70 75

Asn Leu Pro Asn Asn Ser His Gly Ile Thr Asp Phe Ser Ser Asn 80 85 90

Ser Ser Ala Glu His Ser Leu Gly Ser Leu Lys Pro Thr Ser Thr 95 100 105

Ile Ser Thr Ser Pro Pro Leu Ile His Ser Phe Val Ser Lys Val 110 115 120

Pro Trp Asn Ala Pro Ile Ala Asp Glu Asp Leu Leu Pro Ile Ser 125 130 135

Ala His Pro Asn Ala Thr Pro Ala Leu Ser Ser Glu Asn Phe Thr 140 145 150

Trp Ser Leu Val Asn Asp Thr Val Lys Thr Pro Asp Asn Ser Ser 155 160 165

Ile Thr Val Ser Ile Leu Ser Ser Glu Pro Thr Ser Pro Ser Val 170 175 180

Thr Pro Leu Ile Val Glu Pro Ser Gly Trp Leu Thr Thr Asn Ser 185 190 195

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Asp Ser Phe Thr Gly Phe Thr Pro Tyr Gln Glu Lys Thr Thr Leu
Gln Pro Thr Leu Lys Phe Thr Asn Asn Ser Lys Leu Phe Pro Asn
                                     220
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Thr Ser Asp Pro Gln Lys Glu Asn Arg Asn Thr Gly Ile Val Phe
                                     235
Gly Ala Ile Leu Gly Ala Ile Leu Gly Val Ser Leu Leu Thr Leu
                                     250
                245
Val Gly Tyr Leu Leu Cys Gly Lys Arg Lys Thr Asp Ser Phe Ser
                                     265
                260
His Arg Arg Leu Tyr Asp Asp Arg Asn Glu Pro Val Leu Arg Leu
                                     280
                275
Asp Asn Ala Pro Glu Pro Tyr Asp Val Ser Phe Gly Asn Ser Ser
                                     295
                290
Tyr Tyr Asn Pro Thr Leu Asn Asp Ser Ala Met Pro Glu Ser Glu
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Glu Asn Ala Arg Asp Gly Ile Pro Met Asp Asp Ile Pro Pro Leu
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Arg Thr Ser Val
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<210> 42 <211> 1594 <212> DNA <213> Homo sapiens

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ctgageegea eggteagaae teagatactg aceggeaagg ageteegagt 200
tgeeaceeag gaaaaagagg geteetetgg gagatgtatg ettactetet 250
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tacaagtact teatgeeeaa gageaceatt tacegtggag agatgtett 350
ttttgattet gaggateetg caaatteeet tegtggagga gageetaaet 400
teetgeetgt gactgaggag getgacatte gtgaggatga caacattgea 450
atcattgatg tgeetgteee cagtttetet gatagtgaee etgetgegg 550
tatteatgae tttgaaaagg gaatgaetge ttacetggae ttgttgetgg 550

M LEFT

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<210> 43

<211> 263

<212> PRT

<213> Homo sapiens

<400> 43

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Thr Gln Ile Leu Thr Gly Lys Glu Leu Arg Val Ala Thr Gln Glu
35 40 45

Lys Glu Gly Ser Ser Gly Arg Cys Met Leu Thr Leu Leu Gly Leu

60 50 55 Ser Phe Ile Leu Ala Gly Leu Ile Val Gly Gly Ala Cys Ile Tyr Lys Tyr Phe Met Pro Lys Ser Thr Ile Tyr Arg Gly Glu Met Cys Phe Phe Asp Ser Glu Asp Pro Ala Asn Ser Leu Arg Gly Glu 100 95 Pro Asn Phe Leu Pro Val Thr Glu Glu Ala Asp Ile Arg Glu Asp 110 115 Asp Asn Ile Ala Ile Ile Asp Val Pro Val Pro Ser Phe Ser Asp 130 Ser Asp Pro Ala Ala Ile Ile His Asp Phe Glu Lys Gly Met Thr 145 Ala Tyr Leu Asp Leu Leu Gly Asn Cys Tyr Leu Met Pro Leu 155 Asn Thr Ser Ile Val Met Pro Pro Lys Asn Leu Val Glu Leu Phe Gly Lys Leu Ala Ser Gly Arg Tyr Leu Pro Gln Thr Tyr Val Val 185 190 Arg Glu Asp Leu Val Ala Val Glu Glu Ile Arg Asp Val Ser Asn Leu Gly Ile Phe Ile Tyr Gln Leu Cys Asn Asn Arg Lys Ser Phe 215 Arg Leu Arg Arg Arg Asp Leu Leu Gly Phe Asn Lys Arg Ala 230 235 Ile Asp Lys Cys Trp Lys Ile Arg His Phe Pro Asn Glu Phe Ile 245 Val Glu Thr Lys Ile Cys Gln Glu 260 <210> 44 <211> 24 <212> DNA <213> Artificial

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<210> 45

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<211> 26
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<222> 1-26
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<211> 25
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<210> 50 <211> 283 <212> PRT <213> Homo

<213> Homo sapiens

<400> 50

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 Pro
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 Arg
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Gly Ser Gln Glu Gly Asp Gln Glu Val Gln Gly His Gly Val Pro
                                    220
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Val Glu Thr Pro Glu Ala Gln Glu Glu Pro Cys Ser Gly Val Leu
                                    235
                230
Glu Gly Ala Val Val Ala Gly Glu Gly Gln Gly Glu Leu Glu Gly
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<210> 51 <211> 1734 <212> DNA <213> Homo sapien

<213> Homo sapiens

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agacactctg gagagagagg gggctgggca gagatgaagt tccaggggcc 200
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caaagaggcc ggaggggcag ctggctctaa agtcagtgag gcccttggcc 400
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acggagcaga tgctgtccg ggctcctggc agggggtgcc tggccacagt 600
ggtgcttggg aaacttctgg aggccatggc atctttggc ctcaaggtgg 700

1. 10 **FI**III 13

01 *****H H

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<211> 440

<212> PRT

<213> Homo sapiens

<400> 52

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				50					55					60
Gly	Ala	Ala	Gly	Ser 65	Lys	Val	Ser	Glu	Ala 70	Leu	Gly	Gln	Gly	Thr 75
Arg	Glu	Ala	Val	Gly 80	Thr	Gly	Val	Arg	Gln 85	Val	Pro	Gly	Phe	Gly 90
Ala	Ala	Asp	Ala	Leu 95	Gly	Asn	Arg	Val	Gly 100	Glu	Ala	Ala	His	Ala 105
Leu	Gly	Asn	Thr	Gly 110	His	Glu	Ile	Gly	Arg 115	Gln	Ala	Glu	Asp	Val 120
Ile	Arg	His	Gly	Ala 125	Asp	Ala	Val	Arg	Gly 130	Ser	Trp	Gln	Gly	Val 135
Pro	Gly	His	Ser	Gly 140	Ala	Trp	Glu	Thr	Ser 145	Gly	Gly	His	Gly	Ile 150
Phe	Gly	Ser	Gln	Gly 155	Gly	Leu	Gly	Gly	Gln 160	Gly	Gln	Gly	Asn	Pro 165
Gly	Gly	Leu	Gly	Thr 170	Pro	Trp	Val	His	Gly 175	Tyr	Pro	Gly	Asn	Ser 180
Ala	Gly	Ser	Phe	Gly 185	Met	Asn	Pro	Gln	Gly 190	Ala	Pro	Trp	Gly	Gln 195
Gly	Gly	Asn	Gly	Gly 200	Pro	Pro	Asn	Phe	Gly 205	Thr	Asn	Thr	Gln	Gly 210
Ala	Val	Ala	Gln	Pro 215	Gly	Tyr	Gly	Ser	Val 220	Arg	Ala	Ser	Asn	Gln 225
Asn	Glu	Gly	Cys	Thr 230	Asn	Pro	Pro	Pro	Ser 235	Gly	Ser	Gly	Gly	Gly 240
Ser	Ser	Asn	Ser	Gly 245	Gly	Gly	Ser	Gly	Ser 250	Gln	Ser	Gly	Ser	Ser 255
Gly	Ser	Gly	Ser	Asn 260	Gly	Asp	Asn	Asn	Asn 265	Gly	Ser	Ser	Ser	Gly 270
Gly	Ser	Ser	Ser	Gly 275	Ser	Ser	Ser	Gly	Ser 280	Ser	Ser	Gly	Gly	Ser 285
Ser	Gly	Gly	Ser	Ser 290	Gly	Gly	Ser	Ser	Gly 295	Asn	Ser	Gly	Gly	Ser 300
Arg	Gly	Asp	Ser	Gly 305	Ser	Glu	Ser	Ser	Trp 310	Gly	Ser	Ser	Thr	Gly 315
Ser	Ser	Ser	Gly	Asn 320	His	Gly	Gly	Ser	Gly 325	Gly	Gly	Asn	Gly	His 330
Lys	Pro	Gly	Cys	Glu 335	Lys	Pro	Gly	Asn	Glu 340	Ala	Arg	Gly	Ser	Gly 345

.... Methologina. . dia man

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Glu Ser Gly Ile Gln Gly Phe Arg Gly Gln Gly Val Ser Ser Asn 360

Met Arg Glu Ile Ser Lys Glu Gly Asn Arg Leu Leu Gly Gly Ser 375

Gly Asp Asn Tyr Arg Gly Gln Gly Ser Ser Trp Gly Ser Gly 390

Gly Asp Ala Val Gly Gly Val Asn Thr Val Asn Ser Glu Thr Ser 405

Pro Gly Met Phe Asn Phe Asp Thr Phe Trp Lys Asn Phe Lys Ser 420

Lys Leu Gly Phe Ile Asn Trp Asp Ala Ile Asn Lys Asp Gln Arg 435

Ser Ser Arg Ile Pro
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440

<212> DNA

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<212> PRT

<213> Homo sapiens

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<211> 299

<212> PRT

<213> Homo sapiens

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Ile Leu Gly Asn Lys Thr Leu Pro Ser Arg Cys His Gln Cys Val
Ile Val Ser Ser Ser His Leu Leu Gly Thr Lys Leu Gly Pro
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Glu Ile Glu Arg Ala Glu Cys Thr Ile Arg Met Asn Asp Ala Pro
Thr Thr Gly Tyr Ser Ala Asp Val Gly Asn Lys Thr Thr Tyr Arg
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                                    115
Val Val Ala His Ser Ser Val Phe Arg Val Leu Arg Arg Pro Gln
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Pro Pro Ser Lys Met Gln Lys Pro Gln Gly Ser Leu Val Arg Val
Ile Gln Arq Ala Gly Leu Val Phe Pro Asn Met Glu Ala Tyr Ala
Val Ser Pro Gly Arg Met Arg Gln Phe Asp Asp Leu Phe Arg Gly
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Glu Thr Gly Lys Asp Arg Glu Lys Ser His Ser Trp Leu Ser Thr
Gly Trp Phe Thr Met Val Ile Ala Val Glu Leu Cys Asp His Val
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His Val Tyr Gly Met Val Pro Pro Asn Tyr Cys Ser Gln Arg Pro
Arg Leu Gln Arg Met Pro Tyr His Tyr Tyr Glu Pro Lys Gly Pro
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                                    250
Asp Glu Cys Val Thr Tyr Ile Gln Asn Glu His Ser Arg Lys Gly
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SERVICE PROPERTY.

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CELEBRATE MADE 13

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His	Gly	Arg	Leu	Ser 605	Pro	Pro	Glu	Ala	Pro 610	Asp	Arg	Pro	Thr	Ile 615
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Tyr	Ile	Pro	Ala	Ser 740	Asn	Asn	Asn	Thr	Pro 745	Ile	His	Gly	Phe	Tyr 750
Ile	Tyr	Tyr	Arg	Pro 755	Thr	Asp	Ser	Asp	Asn 760	Asp	Ser	Asp	Tyr	Lys 765
Lys	Asp	Met	Val	Glu 770	Gly	Asp	Lys	Tyr	Trp 775	His	Ser	Ile	Ser	His 780
Leu	Gln	Pro	Glu	Thr 785	Ser	Tyr	Asp	Ile	Lys 790	Met	Gln	Cys	Phe	Asn 795
Glu	Gly	Gly	Glu	Ser 800	Glu	Phe	Ser	Asn	Val 805	Met	Ile	Cys	Glu	Thr 810
Lys	Ala	Arg	Lys	Ser 815	Ser	Gly	Gln	Pro	Gly 820	Arg	Leu	Pro	Pro	Pro 825
Thr	Leu	Ala	Pro	Pro 830	Gln	Pro	Pro	Leu	Pro 835	Glu	Thr	Ile	Glu	Arg 840
Pro	Val	Gly	Thr	Gly 845	Ala	Met	Val	Ala	Arg 850	Ser	Ser	Asp	Leu	Pro 855

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Lys His Thr Thr Asp Leu Gly Phe Pro Arg Ser Ala Leu Pro Pro
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Ser Cys Pro Tyr Thr Met Val Pro Leu Gly Gly Leu Pro Gly His
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Gln Ala Ser Gly Gln Pro Tyr Leu Ser Gly Ile Ser Gly Arg Ala
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Cys Ala Asn Gly Ile His Met Asn Arg Gly Cys Pro Ser Ala Ala
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Val Gly Tyr Pro Gly Met Lys Pro Gln Gln His Cys Pro Gly Glu
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Leu Gly Asn Gly Tyr Asp Pro Gln Ser His Gln Ile Thr Arg Gly
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Pro Lys Ser Ser Pro Asp Glu Gly Ser Phe Leu Tyr Thr Leu Pro
                995
                                   1000
Asp Asp Ser Thr His Gln Leu Leu Gln Pro His His Asp Cys Cys
               1010
                                   1015
Gln Arg Gln Glu Gln Pro Ala Ala Val Gly Gln Ser Gly Val Arg
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Arg Ala Pro Asp Ser Pro Val Leu Glu Ala Val Trp Asp Pro Pro
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                                   1045
Phe His Ser Gly Pro Pro Cys Cys Leu Gly Leu Val Pro Val Glu
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Glu Val Asp Ser Pro Asp Ser Cys Gln Val Ser Gly Gly Asp Trp
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Cys Pro Gln His Pro Val Gly Ala Tyr Val Gly Gln Glu Pro Gly
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<211> 25

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<213> Artificial

2.00 DECEMBER 200 13

10 mm

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 tgctgctcct gctactgctg ctgctgctgc ggcagcccgt aacccgcgcg 200
 gagaccacgc cgggcgcccc cagagccctc tccacgctgg gctcccccag 250
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1111 199

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<211> 487

<212> PRT

<213> Homo sapiens

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riz rjin - O

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Leu Asn Val Pro	Asp Asp Ile 305	Leu Gln Leu 3	Leu Lys Asn Gly	Gly 315					
Ile Val Met Val	Thr Leu Ser 320	Met Gly Val 3	Leu Gln Cys Asn	Leu 330					
Leu Ala Asn Val	Ser Thr Val	Ala Asp His 340	Phe Asp His Ile	Arg 345					
Ala Val Ile Gly	Ser Glu Phe 350	Ile Gly Ile 355	Gly Gly Asn Tyr	Asp 360					
Gly Thr Gly Arg	Phe Pro Gln 365	Gly Leu Glu 370	Asp Val Ser Thr	Tyr 375					
Pro Val Leu Ile	Glu Glu Leu 380	Leu Ser Arg 385	Xaa Trp Ser Glu	Glu 390					
Glu Leu Gln Gly	Val Leu Arg 395	Gly Asn Leu 3	Leu Arg Val Phe	Arg 405					
Gln Val Glu Lys	Val Arg Glu 410	Glu Ser Arg 2 415	Ala Gln Ser Pro	Val 420					
Glu Ala Glu Phe	Pro Tyr Gly 425	Gln Leu Ser '	Thr Ser Cys His	Ser 435					
His Leu Val Pro	Gln Asn Gly 440	His Gln Ala '	Thr His Leu Glu	Val 450					
Thr Lys Gln Pro	Thr Asn Arg 455	Val Pro Trp 2	Arg Ser Ser Asn	Ala 465					
Ser Pro Tyr Leu	Val Pro Gly 470	Leu Val Ala . 475	Ala Ala Thr Ile	Pro 480					
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<211> 1564
<212> DNA
<213> Homo sapiens
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ggcccagcaa gcctgataag catgaagctc ttatctttgg tggctgtggt 150
cgggtgtttg ctggtgcccc cagctgaagc caacaagagt tctgaagata 200
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<210> 68

<211> 183

<212> PRT

<213> Homo sapiens

<400> 68

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Cys Ile Cys Pro Pro Tyr Arg Asn Ile Ser Gly His Ile Tyr Asn 35 40 45

Gln Asn Val Ser Gln Lys Asp Cys Asn Cys Leu His Val Val Glu
50 55 60

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Cys Glu Cys Arg Tyr Glu Glu Arg Ser Thr Thr Thr Ile Lys Val
Ile Ile Val Ile Tyr Leu Ser Val Val Gly Ala Leu Leu Tyr
Met Ala Phe Leu Met Leu Val Asp Pro Leu Ile Arg Lys Pro Asp
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Ala Tyr Thr Glu Gln Leu His Asn Glu Glu Glu Asn Glu Asp Ala
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Arg Ser Met Ala Ala Ala Ala Ser Leu Gly Gly Pro Arg Ala
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Asn Thr Val Leu Glu Arg Val Glu Gly Ala Gln Gln Arg Trp Lys
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Met Leu Ser

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atcggcctgc atggtgtc ggagaaaaaa gaagcgctgc caccagatg 550
gcatgtgctg ccccagtacc cgctgcaata atggcatctg tatcccagtt 600
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markin din

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<211> 259

<212> PRT

<213> Homo sapiens

<400> 70

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Ser Arg Ala Lys Leu Asn Ser Ile Lys Ser Ser Leu Gly Gly Glu 35 40 45

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Leu Ala Phe Gly Gly Ser Lys Lys Gly Lys Asn Leu Gly Gln Ala
Tyr Pro Cys Ser Ser Asp Lys Glu Cys Glu Val Gly Arg Tyr Cys
His Ser Pro His Gln Gly Ser Ser Ala Cys Met Val Cys Arg Arg
Lys Lys Lys Arg Cys His Arg Asp Gly Met Cys Cys Pro Ser Thr
Arg Cys Asn Asn Gly Ile Cys Ile Pro Val Thr Glu Ser Ile Leu
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Thr Pro His Ile Pro Ala Leu Asp Gly Thr Arg His Arg Asp Arg
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Asn His Gly His Tyr Ser Asn His Asp Leu Gly Trp Gln Asn Leu
                                     160
Gly Arg Pro His Thr Lys Met Ser His Ile Lys Gly His Glu Gly
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Asp Pro Cys Leu Arg Ser Ser Asp Cys Ile Glu Gly Phe Cys Cys
                                     190
Ala Arg His Phe Trp Thr Lys Ile Cys Lys Pro Val Leu His Gln
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                200
Gly Glu Val Cys Thr Lys Gln Arg Lys Lys Gly Ser His Gly Leu
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Glu Ile Phe Gln Arg Cys Asp Cys Ala Lys Gly Leu Ser Cys Lys
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Cys Gln Lys Ile

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<210> 71

<211> 1809

<212> DNA

<213> Homo sapiens

<400> 71
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<211> 363

<212> PRT

<213> Homo sapiens

<400> 72

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Gln Ile Leu Asp Gln Leu Lys Ala Pro Ser Leu Gly Gln Phe Thr
50 55 60

Thr Thr Pro Ser Thr Gln Gln Asn Ser Thr Ser His Pro Thr Thr 65 70 75

Thr Thr Ser Trp Asp Leu Lys Pro Pro Thr Ser Gln Ser Ser Val

Leu Ser His Leu Asp Phe Lys Ser Gln Pro Glu Pro Ser Pro Val 95 100 105

Leu Ser Gln Leu Ser Gln Arg Gln Gln His Gln Ser Gln Ala Val 110 115 120

Thr Val Pro Pro Pro Gly Leu Glu Ser Phe Pro Ser Gln Ala Lys 125 130 135

Leu Leu Gln Leu Pro Ser Thr Thr Ile Glu Asn Ile Ser Val Ser 155 160 165

Val His Gln Pro Gln Pro Lys His Ile Lys Leu Ala Lys Arg Arg 170 175 180

Ile Pro Pro Ala Ser Lys Ile Pro Ala Ser Ala Val Glu Met Pro 185 190 195

Gly Ser Ala Asp Val Thr Gly Leu Asn Val Gln Phe Gly Ala Leu 200 205 210

Glu Phe Gly Ser Glu Pro Ser Leu Ser Glu Phe Gly Ser Ala Pro 215 220 225

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Ser Ser Glu Asn Ser Asn Gln Ile Pro Ile Ser Leu Tyr Ser Lys
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                                     235
Ser Leu Ser Glu Pro Leu Asn Thr Ser Leu Ser Met Thr Ser Ala
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                245
Val Gln Asn Ser Thr Tyr Thr Thr Ser Val Ile Thr Ser Cys Ser
                                     265
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Leu Thr Ser Ser Ser Leu Asn Ser Ala Ser Pro Val Ala Met Ser
                 275
                                     280
Ser Ser Tyr Asp Gln Ser Ser Val His Asn Arg Ile Pro Tyr Gln
                                     295
                 290
Ser Pro Val Ser Ser Ser Glu Ser Ala Pro Gly Thr Ile Met Asn
                                     310
Gly His Gly Gly Gly Arg Ser Gln Gln Thr Leu Asp Ser Lys Tyr
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                 320
Ser Ser Lys Leu Leu Ser Trp Leu Val Pro Thr Lys Gln Arg
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Lys Arg Ile Ala His Val Met Trp Lys Thr Pro Val Gly Gln Trp
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<222> 1-22
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 tgcactcagc ggtggaggag acggacgcgg ggctgtacac ctgcaacctg 150
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<211> 341

<212> PRT

<213> Homo sapiens

<400> 77

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Ala Gly Leu Tyr Thr Cys Asn Leu His His His Tyr Cys His Leu 35 40 45

Tyr Glu Ser Leu Ala Val Arg Leu Glu Val Thr Asp Gly Pro Pro 50 55 60

Ala Thr Pro Ala Tyr Trp Asp Gly Glu Lys Glu Val Leu Ala Val
65 70 75

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Val Trp Thr Asp Arg His Val Glu Glu Ala Gln Gln Val Val His
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Trp Asp Arg Gln Pro Pro Gly Val Pro His Asp Arg Ala Asp Arg
                                    115
Leu Leu Asp Leu Tyr Ala Ser Gly Glu Arg Arg Ala Tyr Gly Pro
Leu Phe Leu Arg Asp Arg Val Ala Val Gly Ala Asp Ala Phe Glu
                140
Arg Gly Asp Phe Ser Leu Arg Ile Glu Pro Leu Glu Val Ala Asp
                                    160
Glu Gly Thr Tyr Ser Cys His Leu His His His Tyr Cys Gly Leu
                                    175
                170
His Glu Arg Arg Val Phe His Leu Thr Val Ala Glu Pro His Ala
                                    190
                185
Glu Pro Pro Pro Arg Gly Ser Pro Gly Asn Gly Ser Ser His Ser
                                    205
Gly Ala Pro Gly Pro Asp Pro Thr Leu Ala Arg Gly His Asn Val
                                     220
Ile Asn Val Ile Val Pro Glu Ser Arg Ala His Phe Phe Gln Gln
                                    235
Leu Gly Tyr Val Leu Ala Thr Leu Leu Leu Phe Ile Leu Leu
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Val Thr Val Leu Leu Ala Ala Arg Arg Arg Gly Gly Tyr Glu
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                                     265
Tyr Ser Asp Gln Lys Ser Gly Lys Ser Lys Gly Lys Asp Val Asn
                                     280
Leu Ala Glu Phe Ala Val Ala Ala Gly Asp Gln Met Leu Tyr Arg
                                     295
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Ser Glu Asp Ile Gln Leu Asp Tyr Lys Asn Asn Ile Leu Lys Glu
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Arg Ala Glu Leu Ala His Ser Pro Leu Pro Ala Lys Tyr Ile Asp
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Leu Asp Lys Gly Phe Arg Lys Glu Asn Cys Lys
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<211> 2243

<212> DNA

<213> Homo sapiens

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<211> 475

<212> PRT

<213> Homo sapiens

<400> 79

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Leu Leu Glu Lys Leu Leu Asp Arg Pro Pro Pro Gly Leu Gln Arg
35 40 45

Pro Glu Asp Arg Phe Cys Gly Thr Tyr Ile Ile Phe Phe Ser Leu
50 55 60

Gly Ile Gly Ser Leu Leu Pro Trp Asn Phe Phe Ile Thr Ala Lys
65 70 75

Glu Tyr Trp Met Phe Lys Leu Arg Asn Ser Ser Ser Pro Ala Thr 80 85 90

Gly Glu Asp Pro Glu Gly Ser Asp Ile Leu Asn Tyr Phe Glu Ser 95 100 105

Tyr	Leu	Ala	Val	Ala 110	Ser	Thr	Val	Pro	Ser 115	Met	Leu	Cys	Leu	Val 120
Ala	Asn	Phe	Leu	Leu 125	Val	Asn	Arg	Val	Ala 130	Val	His	Ile	Arg	Val 135
Leu	Ala	Ser	Leu	Thr 140	Val	Ile	Leu	Ala	Ile 145	Phe	Met	Val	Ile	Thr 150
Ala	Leu	Val	Lys	Val 155	Asp	Thr	Ser	Ser	Trp 160	Thr	Arg	Gly	Phe	Phe 165
Ala	Val	Thr	Ile	Val 170	Cys	Met	Val	Ile	Leu 175	Ser	Gly	Ala	Ser	Thr 180
Val	Phe	Ser	Ser	Ser 185	Ile	Tyr	Gly	Met	Thr 190	Gly	Ser	Phe	Pro	Met 195
Arg	Asn	Ser	Gln	Ala 200	Leu	Ile	Ser	Gly	Gly 205	Ala	Met	Gly	Gly	Thr 210
Val	Ser	Ala	Val	Ala 215	Ser	Leu	Val	Asp	Leu 220	Ala	Ala	Ser	Ser	Asp 225
Val	Arg	Asn	Ser	Ala 230	Leu	Ala	Phe	Phe	Leu 235	Thr	Ala	Thr	Ile	Phe 240
Leu	Val	Leu	Cys	Met 245	Gly	Leu	Tyr	Leu	Leu 250	Leu	Ser	Arg	Leu	Glu 255
Tyr	Ala	Arg	Tyr	Tyr 260	Met	Arg	Pro	Val	Leu 265	Ala	Ala	His	Val	Phe 270
Ser	Gly	Glu	Glu	Glu 275	Leu	Pro	Gln	Asp	Ser 280	Leu	Ser	Ala	Pro	Ser 285
Val	Ala	Ser	Arg	Phe 290	Ile	Asp	Ser	His	Thr 295	Pro	Pro	Leu	Arg	Pro 300
Ile	Leu	Lys	Lys	Thr 305	Ala	Ser	Leu	Gly	Phe 310	Cys	Val	Thr	Tyr	Val 315
Phe	Phe	Ile	Thr	Ser 320	Leu	Ile	Tyr	Pro	Ala 325	Val	Суѕ	Thr	Asn	Ile 330
Glu	Ser	Leu	Asn	Lys 335		Ser	Gly	Ser	Leu 340	Trp	Thr	Thr	Lys	Phe 345
Phe	Ile	Pro	Leu	Thr 350		Phe	Leu	Leu	Tyr 355	Asn	Phe	Ala	Asp	Leu 360
Cys	Gly	Arg	Gln	Leu 365		Ala	Trp	Ile	Gln 370	Val	Pro	Gly	Pro	Asn 375
Ser	Lys	Ala	Leu	380		Phe	val	Leu	Leu 385	Arg	Thr	Cys	Leu	Ile 390
Pro	Leu	Phe	val	Leu	Суз	Asn	Tyr	Gln	Pro	Arg	Val	His	Leu	Lys

405 400 395 Thr Val Val Phe Gln Ser Asp Val Tyr Pro Ala Leu Leu Ser Ser 415 410 Leu Leu Gly Leu Ser Asn Gly Tyr Leu Ser Thr Leu Ala Leu Leu 430 425 Tyr Gly Pro Lys Ile Val Pro Arg Glu Leu Ala Glu Ala Thr Gly 445 440 Val Val Met Ser Phe Tyr Val Cys Leu Gly Leu Thr Leu Gly Ser 460 455 Ala Cys Ser Thr Leu Leu Val His Leu Ile 475 470 <210> 80 <211> 22 <212> DNA <213> Artificial <220> <221> Artificial sequence <222> 1-22 <223> Synthetic construct. <400> 80 ttttgcggtc accattgtct gc 22 <210> 81 <211> 23 <212> DNA <213> Homo sapiens <220> <221> Artificial sequence <222> 1-23 <223> Synthetic construct. <400> 81 cgtaggtgac acagaagccc agg 23 <210> 82 <211> 49 <212> DNA <213> Artificial <220> <221> Artificial sequence <222> 1-49 <223> Synthetic construct. <400> 82 tacggcatga ccggctcctt tcctatgagg aactcccagg cactgatat 49 <210> 83 <211> 1844

<212> DNA <213> Homo sapiens

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<210> 84 <211> 567 <212> PRT <213> Homo sapiens

(213) nono ourtono

<400> 84 Met Ala Pro Leu Ala Leu His Leu Leu Val Leu Val Pro Ile Leu Leu Ser Leu Val Ala Ser Gln Asp Trp Lys Ala Glu Arg Ser Gln Asp Pro Phe Glu Lys Cys Met Gln Asp Pro Asp Tyr Glu Gln Leu Leu Lys Val Val Thr Trp Gly Leu Asn Arg Thr Leu Lys Pro Gln Arg Val Ile Val Val Gly Ala Gly Val Ala Gly Leu Val Ala Ala Lys Val Leu Ser Asp Ala Gly His Lys Val Thr Ile Leu Glu Ala Asp Asn Arg Ile Gly Gly Arg Ile Phe Thr Tyr Arg Asp Gln Asn 105 Thr Gly Trp Ile Gly Glu Leu Gly Ala Met Arg Met Pro Ser Ser His Arg Ile Leu His Lys Leu Cys Gln Gly Leu Gly Leu Asn Leu 135 125 Thr Lys Phe Thr Gln Tyr Asp Lys Asn Thr Trp Thr Glu Val His 150 145 140

Glu Val Lys Leu Arg Asn Tyr Val Val Glu Lys Val Pro Glu Lys

165

Leu Gly Tyr Ala Leu Arg Pro Gln Glu Lys Gly His Ser Pro Glu Asp Ile Tyr Gln Met Ala Leu Asn Gln Ala Leu Lys Asp Leu Lys 190 Ala Leu Gly Cys Arg Lys Ala Met Lys Lys Phe Glu Arg His Thr Leu Leu Glu Tyr Leu Leu Gly Glu Gly Asn Leu Ser Arg Pro Ala 220 Val Gln Leu Leu Gly Asp Val Met Ser Glu Asp Gly Phe Phe Tyr 235 230 Leu Ser Phe Ala Glu Ala Leu Arg Ala His Ser Cys Leu Ser Asp 250 Arg Leu Gln Tyr Ser Arg Ile Val Gly Gly Trp Asp Leu Leu Pro 265 Arg Ala Leu Leu Ser Ser Leu Ser Gly Leu Val Leu Leu Asn Ala 280 Pro Val Val Ala Met Thr Gln Gly Pro His Asp Val His Val Gln 295 290 Ile Glu Thr Ser Pro Pro Ala Arg Asn Leu Lys Val Leu Lys Ala 310 Asp Val Val Leu Leu Thr Ala Ser Gly Pro Ala Val Lys Arg Ile 320 Thr Phe Ser Pro Pro Leu Pro Arg His Met Gln Glu Ala Leu Arg Arg Leu His Tyr Val Pro Ala Thr Lys Val Phe Leu Ser Phe Arg 355 350 Arg Pro Phe Trp Arg Glu Glu His Ile Glu Gly Gly His Ser Asn Thr Asp Arg Pro Ser Arg Met Ile Phe Tyr Pro Pro Pro Arg Glu 380 385 Gly Ala Leu Leu Leu Ala Ser Tyr Thr Trp Ser Asp Ala Ala Ala 400 Ala Phe Ala Gly Leu Ser Arg Glu Glu Ala Leu Arg Leu Ala Leu 420 410 Asp Asp Val Ala Ala Leu His Gly Pro Val Val Arg Gln Leu Trp Asp Gly Thr Gly Val Val Lys Arg Trp Ala Glu Asp Gln His Ser 440 Gln Gly Gly Phe Val Val Gln Pro Pro Ala Leu Trp Gln Thr Glu

				455					460					465
Lys	Asp	Asp	Trp	Thr 470	Val	Pro	Tyr	Gly	Arg 475	Ile	Tyr	Phe	Ala	Gly 480
Glu	His	Thr	Ala	Tyr 485	Pro	His	Gly	Trp	Val 490	Glu	Thr	Ala	Val	Lys 495
Ser	Ala	Leu	Arg	Ala 500	Ala	Ile	Lys	Ile	Asn 505	Ser	Arg	Lys	Gly	Pro 510
Ala	Ser	Asp	Thr	Ala 515	Ser	Pro	Glu	Gly	His 520	Ala	Ser	Asp	Met	Glu 525
Gly	Gln	Gly	His	Val 530	His	Gly	Val	Ala	Ser 535	Ser	Pro	Ser	His	Asp 540
Leu	Ala	Lys	Glu	Glu 545	Gly	Ser	His	Pro	Pro 550	Val	Gln	Gly	Gln	Leu 555
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s recording

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<213> Homo sapiens

<400> 86

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Glu	His	Ala	Tyr	Glu 350	Pro	Thr	Pro	Asp	Asp 355	Val	Ala	Ile	Ser	Туг 360
Leu	Pro	Leu	Ala	His 365	Met	Phe	Glu	Arg	Ile 370	Val	Gln	Ala	Val	Val 375
Tyr	Ser	Cys	Gly	Ala 380	Arg	Val	Gly	Phe	Phe 385	Gln	Gly	Asp	Ile	Arg 390
Leu	Leu	Ala	Asp	Asp 395	Met	Lys	Thr	Leu	Lys 400	Pro	Thr	Leu	Phe	Pro 405
Ala	Val	Pro	Arg	Leu 410	Leu	Asn	Arg	Ile	Tyr 415	Asp	Lys	Val	Gln	Asn 420
Glu	Ala	Lys	Thr	Pro 425	Leu	Lys	Lys	Phe	Leu 430	Leu	Lys	Leu	Ala	Val 435
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Ser	Phe	Trp	Asp	Lys 455	Leu	Ile	Phe	Ala	Lys 460	Ile	Gln	Asp	Ser	Leu 465
Gly	Gly	Arg	Val	Arg 470	Val	Ile	Val	Thr	Gly 475	Ala	Ala	Pro	Met	Ser 480
Thr	Ser	Val	Met	Thr 485	Phe	Phe	Arg	Ala	Ala 490	Met	Gly	Суз	Gln	Val 495
Tyr	Glu	Ala	Tyr	Gly 500	Gln	Thr	Glu	Суѕ	Thr 505	Gly	Gly	Cys	Thr	Phe 510
Thr	Leu	Pro	Gly	Asp 515	Trp	Thr	Ser	Gly	His 520	Val	Gly	Val	Pro	Leu 525
Ala	Cys	Asn	Tyr	Val 530		Leu	Glu	Asp	Val 535	Ala	Asp	Met	Asn	Tyr 540
Phe	Thr	Val	Asn	Asn 545	Glu	Gly	Glu	Val	Cys 550	Ile	Lys	Gly	Thr	Asn 555
Val	Phe	Lys	Gly	Tyr 560	Leu	Lys	Asp	Pro	Glu 565	Lys	Thr	Gln	Glu	Ala 570
Leu	Asp	Ser	Asp	Gly 575	Trp	Leu	His	Thr	Gly 580	Asp	Ile	Gly	Arg	Trp 585
Leu	Pro	Asn	Gly	Thr 590	Leu	Lys	Ile	Ile	Asp 595	Arg	Lys	Lys	Asn	Ile 600
Phe	Lys	Leu	Ala	Gln 605	Gly	Glu	Tyr	Ile	Ala 610	Pro	Glu	Lys	Ile	Glu 615

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Thr Asp Val Leu Pro Ser Phe Ala Ala Lys Leu Gly Val Lys Gly
Ser Phe Glu Glu Leu Cys Gln Asn Gln Val Val Arq Glu Ala Ile
                665
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Leu Glu Asp Leu Gln Lys Ile Gly Lys Glu Ser Gly Leu Lys Thr
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                680
Phe Glu Gln Val Lys Ala Ile Phe Leu His Pro Glu Pro Phe Ser
                695
                                    700
                                                         705
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Phe Leu Leu Val Thr Val Ile Val Asn Ile Lys Leu Ile Leu Asp 50 55 60

Thr Arg Arg Ala Ile Ser Glu Ala Asn Glu Asp Pro Glu Pro Glu 65 70 75

Gln Asp Tyr Asp Glu Ala Leu Gly Arg Leu Glu Pro Pro Arg Arg 80 85 90

Arg Gly Ser Gly Pro Arg Arg Val Leu Asp Val Glu Val Tyr Ser 95 100 105

Ser Arg Ser Lys Val Tyr Val Ala Val Asp Gly Thr Thr Val Leu 110 115 120

Glu Asp Glu Ala Arg Glu Gln Gly Arg Gly Ile His Val Ile Val 125 130 135

Leu Asn Gln Ala Thr Gly His Val Met Ala Lys Arg Val Phe Asp Thr Tyr Ser Pro His Glu Asp Glu Ala Met Val Leu Phe Leu Asn Met Val Ala Pro Gly Arg Val Leu Ile Cys Thr Val Lys Asp Glu Gly Ser Phe His Leu Lys Asp Thr Ala Lys Ala Leu Leu Arg Ser 185 190 Leu Gly Ser Gln Ala Gly Pro Ala Leu Gly Trp Arg Asp Thr Trp 200 210 Ala Phe Val Gly Arg Lys Gly Gly Pro Val Phe Gly Glu Lys His 215 Ser Lys Ser Pro Ala Leu Ser Ser Trp Gly Asp Pro Val Leu Leu 230 Lys Thr Asp Val Pro Leu Ser Ser Ala Glu Glu Ala Glu Cys His Trp Ala Asp Thr Glu Leu Asn Arg Arg Arg Arg Phe Cys Ser 260 Lys Val Glu Gly Tyr Gly Ser Val Cys Ser Cys Lys Asp Pro Thr Pro Ile Glu Phe Ser Pro Asp Pro Leu Pro Asp Asn Lys Val Leu 290 Asn Val Pro Val Ala Val Ile Ala Gly Asn Arg Pro Asn Tyr Leu 305 310 Tyr Arg Met Leu Arg Ser Leu Leu Ser Ala Gln Gly Val Ser Pro 320 Gln Met Ile Thr Val Phe Ile Asp Gly Tyr Tyr Glu Glu Pro Met Asp Val Val Ala Leu Phe Gly Leu Arg Gly Ile Gln His Thr Pro 350 360 Ile Ser Ile Lys Asn Ala Arg Val Ser Gln His Tyr Lys Ala Ser 365 370 Leu Thr Ala Thr Phe Asn Leu Phe Pro Glu Ala Lys Phe Ala Val 380 385 390 Val Leu Glu Glu Asp Leu Asp Ile Ala Val Asp Phe Phe Ser Phe 395 400 Leu Ser Gln Ser Ile His Leu Leu Glu Glu Asp Asp Ser Leu Tyr 410 420 Cys Ile Ser Ala Trp Asn Asp Gln Gly Tyr Glu His Thr Ala Glu

				425					430					435
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Trp	Val	Leu	Arg	Arg 455	Ser	Leu	Tyr	Lys	Glu 460	Glu	Leu	Glu	Pro	Lys 465
Trp	Pro	Thr	Pro	Glu 470	Lys	Leu	Trp	Asp	Trp 475	Asp	Met	Trp	Met	Arg 480
Met	Pro	Glu	Gln	Arg 485	Arg	Gly	Arg	Glu	Cys 490	Ile	Ile	Pro	Asp	Val 495
Ser	Arg	Ser	Tyr	His 500	Phe	Gly	Ile	Val	Gly 505	Leu	Asn	Met	Asn	Gly 510
Tyr	Phe	His	Glu	Ala 515	Tyr	Phe	Lys	Lys	His 520	Lys	Phe	Asn	Thr	Val 525
Pro	Gly	Val	Gln	Leu 530	Arg	Asn	Val	Asp	Ser 535	Leu	Lys	Lys	Glu	Ala 540
Tyr	Glu	Val	Glu	Val 545	His	Arg	Leu	Leu	Ser 550	Glu	Ala	Glu	Val	Leu 555
Asp	His	Ser	Lys	Asn 560	Pro	Cys	Glu	Asp	Ser 565	Phe	Leu	Pro	Asp	Thr 570
Glu	Gly	His	Thr	Tyr 575	Val	Ala	Phe	Ile	Arg 580	Met	Glu	Lys	Asp	Asp 585
Asp	Phe	Thr	Thr	Trp 590	Thr	Gln	Leu	Ala	Lys 595	Cys	Leu	His	Ile	Trp 600
Asp	Leu	Asp	Val	Arg 605	Gly	Asn	His	Arg	Gly 610	Leu	Trp	Arg	Leu	Phe 615
Arg	Lys	Lys	Asn	His 620	Phe	Leu	Val	Val	Gly 625	Val	Pro	Ala	Ser	Pro 630
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Ser Glu Glu Arg Leu Lys Leu Val Thr Val Leu Gly Ala Gly Leu 35 40 45

Leu Cys Gly Thr Ala Leu Ala Val Ile Val Pro Glu Gly Val His 50 55 60

Ala Leu Tyr Glu Asp Ile Leu Glu Gly Lys His His Gln Ala Ser
65 70 75

Glu Thr His Asn Val Ile Ala Ser Asp Lys Ala Ala Glu Lys Ser 80 85 90

Val Val His Glu His Glu His Ser His Asp His Thr Gln Leu His
95 100 105

Ala Tyr Ile Gly Val Ser Leu Val Leu Gly Phe Val Phe Met Leu 110 115 120

Leu Val Asp Gln Ile Gly Asn Ser His Val His Ser Thr Asp Asp 125 130 135

Pro Glu Ala Ala Arg Ser Ser Asn Ser Lys Ile Thr Thr Leu 140 145 150

Gly Leu Val Val His Ala Ala Ala Asp Gly Val Ala Leu Gly Ala 155 160 165

Ala Ala Ser Thr Ser Gln Thr Ser Val Gln Leu Ile Val Phe Val 170 175 180

Ala Ile Met Leu His Lys Ala Pro Ala Ala Phe Gly Leu Val Ser 185 190 195

Phe Leu Met His Ala Gly Leu Glu Arg Asn Arg Ile Arg Lys His 200 205 210

Leu Leu Val Phe Ala Leu Ala Ala Pro Val Met Ser Met Val Thr 215 220 225

Tyr Leu Gly Leu Ser Lys Ser Ser Lys Glu Ala Leu Ser Glu Val

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Asn Tyr Trp Ile Ala Ser Ser Arg Ser Val Asp Leu Gln Thr Arg 35 40 45

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Gly Ala Val Glu Leu Lys Lys Asn Glu Phe Gln Gly Glu Leu Glu
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Gln Leu Glu Ser Val Asn Lys Leu Tyr Gln Asp Glu Lys Ala Val 95 100 105

Leu Val Asn Asn Ile Thr Thr Gly Glu Arg Leu Ile Arg Val Leu 110 115 120

Gln Asp Gln Leu Lys Thr Leu Gln Arg Asn Tyr Gly Arg Leu Gln $125 \hspace{1cm} 130 \hspace{1cm} 135$

Gln Asp Val Leu Gln Phe Gln Lys Asn Gln Thr Asn Leu Glu Arg \$140\$ \$150\$

Lys Phe Ser Tyr Asp Leu Ser Gln Cys Ile Asn Gln Met Lys Glu 155 160 165

Val Lys Glu Gln Cys Glu Glu Arg Ile Glu Glu Val Thr Lys Lys 170 175 180

Gly Asn Glu Ala Val Ala Ser Arg Asp Leu Ser Glu Asn Asn Asp 185 190 195

Gln Arg Gln Gln Leu Gln Ala Leu Ser Glu Pro Gln Pro Arg Leu 200 205 210

Gln Ala Ala Gly Leu Pro His Thr Glu Val Pro Gln Gly Lys Gly 215 220 225

Asn Val Leu Gly Asn Ser Lys Ser Gln Thr Pro Ala Pro Ser Ser 230 235 240

11710 19

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Gly Gly Arg Gly Phe Gly Gly Ala Gly Glu Leu Gly Gln Thr Pro
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Gln Val Gln Ala Ala Leu Ser Val Ser Gln Glu Asn Pro Glu Met
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Glu Gly Pro Glu Arg Asp Gln Leu Val Ile Pro Asp Gly Gln Glu
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Glu Glu Gln Glu Ala Ala Gly Glu Gly Arg Asn Gln Gln Lys Leu
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Glu Thr Asp Lys Gln Ala Ala Leu Ala Gly Asn Asp Arg Asn Ile
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Gly Pro Gly Ser Leu Pro Trp Gly Ser Gln Gly Lys Pro Gly Ala
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Cys Trp Met Ala Ser Arg Phe Ser Arg Val Val Leu Val Leu Ile 65 70 75

Asp Ala Leu Arg Phe Asp Phe Ala Gln Pro Gln His Ser His Val 80 85 90

Pro Arg Glu Pro Pro Val Ser Leu Pro Phe Leu Gly Lys Leu Ser 95 100 105

Ser Leu Gln Arg Ile Leu Glu Ile Gln Pro His His Ala Arg Leu 110 115 120

Tyr Arg Ser Gln Val Asp Pro Pro Thr Thr Thr Met Gln Arg Leu 125 130 135

Lys Ala Leu Thr Thr Gly Ser Leu Pro Thr Phe Ile Asp Ala Gly
140 145 150

Ser Asn Phe Ala Ser His Ala Ile Val Glu Asp Asn Leu Ile Lys 155 160 165

Gln Leu Thr Ser Ala Gly Arg Arg Val Val Phe Met Gly Asp Asp 170 175 180

Thr Trp Lys Asp Leu Phe Pro Gly Ala Phe Ser Lys Ala Phe Phe 185 190 195

Phe Pro Ser Phe Asn Val Arg Asp Leu Asp Thr Val Asp Asn Gly

atti matallälla.

11 to 1 to 2 to 1 1 1 1 1 1 1 1

1.0 Mg | 1

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His	Gly	Pro	His	His 245	Pro	Glu	Met	Ala	Lys 250	Lys	Leu	Ser	Gln	Met 255
Asp	Gln	Val	Ile	Gln 260	Gly	Leu	Val	Glu	Arg 265	Leu	Glu	Asn	Asp	Thr 270
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His	Gly	Gly	Asp	Ser 290	Glu	Leu	Glu	Val	Ser 295	Ala	Ala	Leu	Phe	Leu 300
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Arg	Ala	Met	Cys	Ile 440	Glu	Ser	Trp	Ala	Arg 445	Phe	Ser	Leu	Val	Arg 450
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		Ala		470					475					480
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His 1	Leu	Leu	Ala	Ala 875	Gly	Ile	Pro	Val	Thr 880	Thr	Pro	Gly	Pro	Phe 885
Thr	Val	Pro	Trp	Gln 890	Ala	Val	Ser	Ala	Trp 895	Ala	Leu	Met	Ala	Thr 900
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His '	Trp	His	Ala	Ala 920	Phe	Val	Gly	Phe	Pro 925	Glu	Gly	His	Gly	Ser 930
Cys :	Thr	Trp	Leu	Pro 935	Ala	Leu	Leu	Val	Gly 940	Ala	Asn	Thr	Phe	Ala 945
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Pro 1	Phe	Leu	Cys	Glu 965	Ser	Gln	Gly	Leu	Arg 970	Lys	Arg	Gln	Gln	Pro 975
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Glu 1	Pro	Leu	Met	Glu 995	Met	Arg	Leu		Asp 1000	Ala	Pro	Gln	His 1	Phe .005
Tyr A	Ala	Ala		Leu L010	Gln	Leu	Gly		Lys 1015	Tyr	Leu	Phe		Leu .020
Gly :	Ile	Gln		Leu 1025	Ala	Cys	Ala		Ala 1030	Ala	Ser	Ile		Arg .035
Arg l	His	Leu		Val L040	Trp	Lys	Val		Ala 1045	Pro	Lys	Phe		Phe .050
Glu i	Ala	Val	_	Phe 1055	Ile	Val	Ser		Val 1060	Gly	Leu	Leu		Gly .065
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Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser 50 55 60

Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu 65 70 75

Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His
80 85 90

Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val 95 100 105

His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln Pro 110 115 120

Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Ser Ser Glu 125 130 135

Phe Lys Ala Lys Ile Ile Phe Trp Tyr Val Leu Pro Ile Ser Ile 140 145 150

Thr Val Phe Leu Phe Ser Val Met Gly Tyr Ser Ile Tyr Arg Tyr 155 160 165

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Ile	Ser	His	Gln	Asp 215	Met	Ser	Leu	Leu	Gly 220	Lys	Ser	Ser	Asp	Val 225
Ser	Ser	Leu	Asn	Asp 230	Pro	Gln	Pro	Ser	Gly 235	Asn	Leu	Arg	Pro	Pro 240
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Met	Glu	Ile	Phe	Cys 260	Asp	Ser	Glu	Glu	Asn 265	Thr	Glu	Gly	Thr	Ser 270
Leu	Thr	Gln	Gln	Glu 275	Ser	Leu	Ser	Arg	Thr 280	Ile	Pro	Pro	Asp	Lys 285
Thr	Val	Ile	Glu	Tyr 290	Glu	Tyr	Asp	Val	Arg 295	Thr	Thr	Asp	Ile	Cys 300
Ala	Gly	Pro	Glu	Glu 305	Gln	Glu	Leu	Ser	Leu 310	Gln	Glu	Glu	Val	Ser 315
Thr	Gln	Gly	Thr	Leu 320	Leu	Glu	Ser	Gln	Ala 325	Ala	Leu	Ala	Val	Leu 330
Gly	Pro	Gln	Thr	Leu 335	Gln	Tyr	Ser	Tyr	Thr 340	Pro	Gln	Leu	Gln	Asp 345
Leu	Asp	Pro	Leu	Ala 350	Gln	Glu	His	Thr	Asp 355	Ser	Glu	Glu	Gly	Pro 360
Glu	Glu	Glu	Pro	Ser 365	Thr	Thr	Leu	Val	Asp 370	Trp	Asp	Pro	Gln	Thr 375
Gly	Arg	Leu	Cys	Ile 380	Pro	Ser	Leu	Ser	Ser 385	Phe	Asp	Gln	Asp	Ser 390
Glu	Gly	Суз	Glu	Pro 395	Ser	Glu	Gly	Asp	Gly 400	Leu	Gly	Glu	Glu	Gly 405
Leu	Leu	Ser	Arg	Leu 410	Tyr	Glu	Glu	Pro	Ala 415	Pro	Asp	Arg	Pro	Pro 420
Gly	Glu	Asn	Glu	Thr 425	Tyr	Leu	Met	Gln	Phe 430	Met	Glu	Glu	Trp	Gly 435
Leu	Tyr	Val	Gln	Met 440	Glu	Asn								

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<222> 1-21
<223> Synthetic construct
<400> 105
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<210> 106
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<222> 1-18
<223> Synthetic construct.
<400> 106
cagtgtgcca ggactttg 18
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<222> 1-18
<223> Synthetic construct.
<400> 107
agtcgcaggc agcgttgg 18
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<222> 1-25
<223> Synthetic construct.
<400> 108
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<221> Artificial Sequence

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<223> Synthetic construct.
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c 51
<210> 110
<211> 1114
<212> DNA
<213> Homo sapiens
<400> 110
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cgccagcctg cgtctgccat ggggctcggg ttgaggggct ggggacgtcc 100
tctgctgact gtggccaccg ccctgatgct gcccgtgaag ccccccgcag 150
gctcctgggg ggcccagatc atcgggggcc acgaggtgac cccccactcc 200
aggccctaca tggcatccgt gcgcttcggg ggccaacatc actgcggagg 250
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acagagacct ccgcactggc ctggtggtgc tgggcgccca cgtcctgagt 350
actgcggagc ccacccagca ggtgtttggc atcgatgctc tcaccacgca 400
ccccgactac caccccatga cccacgccaa cgacatctgc ctgctgcggc 450
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tgcaaagggc agaagcaaac ccagtaaaat gttaactgac aaaaaaaaa 1100

aaaaaaaaa gaaa 1114

<210> 111

<211> 283

<212> PRT

<213> Homo sapiens

<400> 111

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Ala Thr Ala Leu Met Leu Pro Val Lys Pro Pro Ala Gly Ser Trp
20 25 30

Gly Ala Gln Ile Ile Gly Gly His Glu Val Thr Pro His Ser Arg 35 40 45

Pro Tyr Met Ala Ser Val Arg Phe Gly Gly Gln His His Cys Gly 50 55 60

Gly Phe Leu Leu Arg Ala Arg Trp Val Val Ser Ala Ala His Cys
65 70 75

Phe Ser His Arg Asp Leu Arg Thr Gly Leu Val Val Leu Gly Ala 80 85 90

His Val Leu Ser Thr Ala Glu Pro Thr Gln Gln Val Phe Gly Ile $95\,$

Asp Ala Leu Thr Thr His Pro Asp Tyr His Pro Met Thr His Ala 110 115

Asn Asp Ile Cys Leu Leu Arg Leu Asn Gly Ser Ala Val Leu Gly 125 130 135

Pro Ala Val Gly Leu Leu Arg Leu Pro Gly Arg Arg Ala Arg Pro 140 145 150

Pro Thr Ala Gly Thr Arg Cys Arg Val Ala Gly Trp Gly Phe Val 155 160 165

Ser Asp Phe Glu Glu Leu Pro Pro Gly Leu Met Glu Ala Lys Val 170 175 180

Arg Val Leu Asp Pro Asp Val Cys Asn Ser Ser Trp Lys Gly His
185 190 195

Leu Thr Leu Thr Met Leu Cys Thr Arg Ser Gly Asp Ser His Arg 200 205 210

Arg Gly Phe Cys Ser Ala Asp Ser Gly Gly Pro Leu Val Cys Arg 215 220 225

Asn Arg Ala His Gly Leu Val Ser Phe Ser Gly Leu Trp Cys Gly 230 235 240

Asp Pro Lys Thr Pro Asp Val Tyr Thr Gln Val Ser Ala Phe Val 245 250 255

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                                      265
 Pro Leu Pro Gly Thr Thr Arg Pro Pro Gly Glu Ala Ala
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<222> 1-23
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<400> 113
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<222> 1-44
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<212> DNA
<213> Homo sapiens
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 tatgtcaccg gtggggcttg ccccagcaag gccaccatcc ctgggaagac 200
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1 11

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<210> 116

<211> 331

<212> PRT

<213> Homo sapiens

<400> 116

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Gly Ala Ala Val Leu Leu Lys Asp Tyr Val Thr Gly Gly Ala Cys 20 25 30

Pro Ser Lys Ala Thr Ile Pro Gly Lys Thr Val Ile Val Thr Gly 35 40 45

Ala Asn Thr Gly Ile Gly Lys Gln Thr Ala Leu Glu Leu Ala Arg 50 55 60

Arg Gly Gly Asn Ile Ile Leu Ala Cys Arg Asp Met Glu Lys Cys
65 70 75

Glu Ala Ala Ala Lys Asp Ile Arg Gly Glu Thr Leu Asn His His 80 85 90

Val Asn Ala Arg His Leu Asp Leu Ala Ser Leu Lys Ser Ile Arg 95 100 105

Glu Phe Ala Ala Lys Ile Ile Glu Glu Glu Glu Arg Val Asp Ile 110 115 120

Leu Ile Asn Asn Ala Gly Val Met Arg Cys Pro His Trp Thr 125 130 135

Glu Asp Gly Phe Glu Met Gln Phe Gly Val Asn His Leu Gly His 140 145 150

Phe Leu Leu Thr Asn Leu Leu Leu Asp Lys Leu Lys Ala Ser Ala 155 160 165

Pro Ser Arg Ile Ile Asn Leu Ser Ser Leu Ala His Val Ala Gly 170 175 180

His Ile Asp Phe Asp Asp Leu Asn Trp Gln Thr Arg Lys Tyr Asn 185 190 195

Thr Lys Ala Ala Tyr Cys Gln Ser Lys Leu Ala Ile Val Leu Phe 200 205 210

Thr Lys Glu Leu Ser Arg Arg Leu Gln Gly Ser Gly Val Thr Val 215 220 225

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Asn Ala Leu His Pro 230 Gly Val Ala Arg Thr 235 Glu Leu Gly Arg His 240

Thr Gly Ile His Gly Ser Thr Phe Ser Ser Thr Thr Leu Gly Pro 255

Ile Phe Trp Leu Leu Val Lys Ser Pro Glu Leu Ala Ala Gln Pro 270

Ser Thr Tyr Leu Ala Val Ala Glu Glu Leu 280 Ala Asp Val Ser Gly 285

Lys Tyr Phe Asp Gly Leu Lys Gln Lys Ala 295 Pro Ala Pro Glu Ala 300

Glu Asp Glu Glu Val Ala Arg Arg Leu Trp 310 Ala Glu Ser Ala Arg 315

Leu Val Gly Leu Glu Ala Pro Ser Val Arg Glu Gln Pro Leu Pro 330
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 gggcgacacg ttctcggcgc tgaccagcgt ggcggcgcc ctggcgcccg 150
 agcgccggct gctggggctg ctgaggcggt acctgcgcgg ggaggaggcg 200
 cggctgcggg acctgactag attctacgac aaggtacttt ctttgcatga 250
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 aacgcctgca gtctgactgg aggaatgtgg tacatagtct ggaggccagt 350
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 ttccgaggat cttaccggag gtggaagaca gaggatgagg caagtctaga 700

agatgccttg gatcacttgg cctttgctta tttccgggca ggaaatgttt 750 cgtgtgccct cagcctctct cgggagtttc ttctctacag cccagataat 800 aagaggatgg ccaggaatgt cttgaaatat gaaaggctct tggcagagag 850 ccccaaccac gtggtagctg aggctgtcat ccagaggccc aatatacccc 900 acctgcagac cagagacace tacgaggggc tatgtcagac cctgggttcc 950 cagcccactc tctaccagat ccctagcctc tactgttcct atgagaccaa 1000 ttccaacgcc tacctgctgc tccagcccat ccggaaggag gtcatccacc 1050 tggagcccta cattgctctc taccatgact tcgtcagtga ctcagaggct 1100 cagaaaatta gagaacttgc agaaccatgg ctacagaggt cagtggtggc 1150 atcaggggag aagcagttac aagtggagta ccgcatcagc aaaagtgcct 1200 ggctgaagga cactgttgac ccaaaactgg tgaccctcaa ccaccgcatt 1250 gctgccctca caggccttga tgtccggcct ccctatgcag agtatctgca 1300 ggtggtgaac tatggcatcg gaggacacta tgagcctcac tttgaccatg 1350 ctacgtcacc aagcagccc ctctacagaa tgaagtcagg aaaccgagtt 1400 gcaacattta tgatctatct gagctcggtg gaagctggag gagccacagc 1450 cttcatctat gccaacctca gcgtgcctgt ggttaggaat gcagcactgt 1500 tttggtggaa cctgcacagg agtggtgaag gggacagtga cacacttcat 1550 gctggctgtc ctgtcctggt gggagataag tgggtggcca acaagtggat 1600 acatgagtat ggacaggaat tccgcagacc ctgcagctcc agccctgaag 1650 actgaactgt tggcagagag aagctggtgg agtcctgtgg ctttccagag 1700 aagccaggag ccaaaagctg gggtaggaga ggagaaagca gagcagcctc 1750 ctggaagaag gccttgtcag ctttgtctgt gcctcgcaaa tcagaggcaa 1800 gggagaggtt gttaccaggg gacactgaga atgtacattt gatctgcccc 1850 agccacggaa gtcagagtag gatgcacagt acaaaggagg ggggagtgga 1900 ggcctgagag ggaagtttct ggagttcaga tactctctgt tgggaacagg 1950 acatctcaac agtctcaggt tcgatcagtg ggtcttttgg cactttgaac 2000 cttgaccaca gggaccaaga agtggcaatg aggacacctg caggagggc 2050 tagcctgact cccagaactt taagactttc tccccactgc cttctgctgc 2100 ageccaagea gggagtgtee eesteecaga ageatateee agatgagtgg 2150

· promotion was

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<210> 118

<211> 544

<212> PRT

<213> Homo sapiens

<400> 118

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Leu Gly Thr Gly Asp Pro Glu Arg Ala Ala Ala Arg Gly Asp Thr 20 25 30

Phe Ser Ala Leu Thr Ser Val Ala Arg Ala Leu Ala Pro Glu Arg
35 40 45

Arg Leu Leu Gly Leu Leu Arg Arg Tyr Leu Arg Gly Glu Glu Ala 50 55 60

Arg Leu Arg Asp Leu Thr Arg Phe Tyr Asp Lys Val Leu Ser Leu 65 70 75

His Glu Asp Ser Thr Thr Pro Val Ala Asn Pro Leu Leu Ala Phe 80 85 90

Thr Leu Ile Lys Arg Leu Gln Ser Asp Trp Arg Asn Val Val His
95 100 105

Ser Leu Glu Ala Ser Glu Asn Ile Arg Ala Leu Lys Asp Gly Tyr 110 115 120

Glu Lys Val Glu Gln Asp Leu Pro Ala Phe Glu Asp Leu Glu Gly
125 130 135

Ala Ala Arg Ala Leu Met Arg Leu Gln Asp Val Tyr Met Leu Asn 140 145 150

Val Lys Gly Leu Ala Arg Gly Val Phe Gln Arg Val Thr Gly Ser 155 160 165

Ala Ile Thr Asp Leu Tyr Ser Pro Lys Arg Leu Phe Ser Leu Thr 170 175 180

Gly Asp Asp Cys Phe Gln Val Gly Lys Val Ala Tyr Asp Met Gly
185 190 190

Asp Tyr Tyr His Ala Ile Pro Trp Leu Glu Glu Ala Val Ser Leu 200 205 210

Phe Arg Gly Ser Tyr Gly Glu Trp Lys Thr Glu Asp Glu Ala Ser 215 220 225

Leu Glu Asp Ala Leu Asp His Leu Ala Phe Ala Tyr Phe Arg Ala 230 235 240

Gly	Asn	Val	Ser	Cys 245	Ala	Leu	Ser	Leu	Ser 250	Arg	Glu	Phe	Leu	Leu 255
Tyr	Ser	Pro	Asp	Asn 260	Lys	Arg	Met	Ala	Arg 265	Asn	Val	Leu	Lys	Tyr 270
Glu	Arg	Leu	Leu	Ala 275	Glu	Ser	Pro	Asn	His 280	Val	Val	Ala	Glu	Ala 285
Val	Ile	Gln	Arg	Pro 290	Asn	Ile	Pro	His	Leu 295	Gln	Thr	Arg	Asp	Thr 300
Tyr	Glu	Gly	Leu	Cys 305	Gln	Thr	Leu	Gly	Ser 310	Gln	Pro	Thr	Leu	Tyr 315
Gln	Ile	Pro	Ser	Leu 320	Tyr	Cys	Ser	Tyr	Glu 325	Thr	Asn	Ser	Asn	Ala 330
Tyr	Leu	Leu	Leu	Gln 335	Pro	Ile	Arg	Lys	Glu 340	Val	Ile	His	Leu	Glu 345
Pro	Tyr	Ile	Ala	Leu 350	Tyr	His	Asp	Phe	Val 355	Ser	Asp	Ser	Glu	Ala 360
Gln	Lys	Ile	Arg	Glu 365	Leu	Ala	Glu	Pro	Trp 370	Leu	Gln	Arg	Ser	Val 375
Val	Ala	Ser	Gly	Glu 380	Lys	Gln	Leu	Gln	Val 385	Glu	Tyr	Arg	Ile	Ser 390
Lys	Ser	Ala	Trp	Leu 395	Lys	Asp	Thr	Val	Asp 400	Pro	Lys	Leu	Val	Thr 405
Leu	Asn	His	Arg	Ile 410	Ala	Ala	Leu	Thr	Gly 415	Leu	Asp	Val	Arg	Pro 420
Pro	Tyr	Ala	Glu	Tyr 425	Leu	Gln	Val	Val	Asn 430	Tyr	Gly	Ile	Gly	Gly 435
His	Tyr	Glu	Pro	His 440	Phe	Asp	His	Ala	Thr 445	Ser	Pro	Ser	Ser	Pro 450
Leu	Tyr	Arg	Met	Lys 455	Ser	Gly	Asn	Arg	Val 460	Ala	Thr	Phe	Met	Ile 465
Tyr	Leu	Ser	Ser	Val 470	Glu	Ala	Gly	Gly	Ala 475	Thr	Ala	Phe	Ile	Tyr 480
Ala	Asn	Leu	Ser	Val 485	Pro	Val	Val	Arg	Asn 490	Ala	Ala	Leu	Phe	Trp 495
Trp	Asn	Leu	His	Arg 500	Ser	Gly	Glu	Gly	Asp 505	Ser	Asp	Thr	Leu	His 510
Ala	Gly	Cys	Pro	Val 515	Leu	Val	Gly	Asp	Lys 520	Trp	Val	Ala	Asn	Lys 525
Trp	Ile	His	Glu	Tyr	Gly	Gln	Glu	Phe	Arg	Arg	Pro	Cys	Ser	Ser

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<211> 23
<212> DNA
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<210> 119

<213> Artificial

Ser Pro Glu Asp

<220>

<221> Artificial Sequence

<222> 1-23

<223> Synthetic construct.

<400> 119

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<210> 120 <211> 24

<212> DNA

<213> Artificial

<220>

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<221> Artificial Sequence

<222> 1-24

<223> Synthetic construct.

<400> 120

ggccaagtga tccaaggcat cttc 24

<210> 121

<211> 49

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-49

<223> Synthetic construct.

<400> 121

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<210> 122

<211> 1778

<212> DNA

<213> Homo sapiens

<400> 122

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gaatcggccc tggcaggtgg ggccacgagc gctggctgag ggaccgagcc 150

ggagagecee ggageceeg taaceegege ggggagegee caggatgeeg 200

ים האוון אוויות תוקה ביייינים האוון ואין אחת ייזון אוואוואווזיון ייון אווייי

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gtacagataa caggagtttc tgactaatca aagctggtat ttccccgcat 1700 gtcttattct tgcccttccc ccaaccagtt tgttaatcaa acaataaaaa 1750 catgttttgt tttgtttta aaaaaaaa 1778

<210> 123

<211> 294

<212> PRT

<213> Homo sapiens

<400> 123

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Phe Trp Leu Ile Gly Ala Leu Val Leu Ser Val Gly Ile Tyr Ala

Glu Val Glu Arg Gln Lys Tyr Lys Thr Leu Glu Ser Ala Phe Leu 50 55 60

Ala Pro Ala Ile Ile Leu Ile Leu Gly Val Val Met Phe Met 65 70 75

Val Ser Phe Ile Gly Val Leu Ala Ser Leu Arg Asp Asn Leu Tyr 80 85 90

Leu Leu Gln Ala Phe Met Tyr Ile Leu Gly Ile Cys Leu Ile Met 95 100 105

Glu Leu Ile Gly Gly Val Val Ala Leu Thr Phe Arg Asn Gln Thr 110 115 120

Ile Asp Phe Leu Asn Asp Asn Ile Arg Arg Gly Ile Glu Asn Tyr 125 130 135

Tyr Asp Asp Leu Asp Phe Lys Asn Ile Met Asp Phe Val Gln Lys 140 145 150

Lys Phe Lys Cys Cys Gly Gly Glu Asp Tyr Arg Asp Trp Ser Lys 155 160 165

Asn Gln Tyr His Asp Cys Ser Ala Pro Gly Pro Leu Ala Cys Gly 170 175 180

Val Pro Tyr Thr Cys Cys Ile Arg Asn Thr Thr Glu Val Val Asn 185 190 195

Thr Met Cys Gly Tyr Lys Thr Ile Asp Lys Glu Arg Phe Ser Val 200 205

Gln Asp Val Ile Tyr Val Arg Gly Cys Thr Asn Ala Val Ile Ile 215 220 225

Trp Phe Met Asp Asn Tyr Thr Ile Met Ala Cys Ile Leu Leu Gly

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<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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Leu Gly Pro Lys Val Ile Lys Glu Lys Leu Thr Gln Glu Leu Lys 35 40 45

Asp His Asn Ala Thr Ser Ile Leu Gln Gln Leu Pro Leu Leu Ser 50 55 60

Ala Met Arg Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser 65 70 75

Leu Val Asn Thr Val Leu Lys His Ile Ile Trp Leu Lys Val Ile 80 85 90

Thr Ala Asn Ile Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp $95 \hspace{1.5cm} 100 \hspace{1.5cm} 105$

Gln Glu Leu Leu Val Lys Ile Pro Leu Asp Met Val Ala Gly Phe 110 115 120

Asn Thr Pro Leu Val Lys Thr Ile Val Glu Phe His Met Thr Thr 125 130 135

Glu Ala Gln Ala Thr Ile Arg Met Asp Thr Ser Ala Ser Gly Pro $140 \,$ 145 $\,$ 150

Thr Arg Leu Val Leu Ser Asp Cys Ala Thr Ser His Gly Ser Leu 155 160 165

Arg Ile Gln Leu Leu Tyr Lys Leu Ser Phe Leu Val Asn Ala Leu 170 175 180

Ala Lys Gln Val Met Asn Leu Leu Val Pro Ser Leu Pro Asn Leu 185 190 195

Val Lys Asn Gln Leu Cys Pro Val Ile Glu Ala Ser Phe Asn Gly 200 205 210

Met Tyr Ala Asp Leu Leu Gln Leu Val Lys Val Pro Ile Ser Leu 215 220 225

Ser	Ile	Asp	Arg	Leu 230	Glu	Phe	Asp	Leu	Leu 235	Tyr	Pro	Ala	Ile	Lys 240
Gly	Asp	Thr	Ile	Gln 245	Leu	Tyr	Leu	Gly	Ala 250	Lys	Leu	Leu	Asp	Ser 255
Gln	Gly	Lys	Val	Thr 260	Lys	Trp	Phe	Asn	Asn 265	Ser	Ala	Ala	Ser	Leu 270
Thr	Met	Pro	Thr	Leu 275	Asp	Asn	Ile	Pro	Phe 280	Ser	Leu	Ile	Val	Ser 285
Gln	Asp	Val	Val	Lys 290	Ala	Ala	Val	Ala	Ala 295	Val	Leu	Ser	Pro	Glu 300
Glu	Phe	Met	Val	Leu 305	Leu	Asp	Ser	Val	Leu 310	Pro	Glu	Ser	Ala	His 315
Arg	Leu	Lys	Ser	Ser 320	Ile	Gly	Leu	Ile	Asn 325	Glu	Lys	Ala	Ala	Asp 330
Lys	Leu	Gly	Ser	Thr 335	Gln	Ile	Val	Lys	Ile 340	Leu	Thr	Gln	Asp	Thr 345
Pro	Glu	Phe	Phe	Ile 350	Asp	Gln	Gly	His	Ala 355	Lys	Val	Ala	Gln	Leu 360
Ile	Val	Leu	Glu	Val 365	Phe	Pro	Ser	Ser	Glu 370	Ala	Leu	Arg	Pro	Leu 375
Phe	Thr	Leu	Gly	Ile 380	Glu	Ala	Ser	Ser	Glu 385	Ala	Gln	Phe	Tyr	Thr 390
Lys	Gly	Asp	Gln	Leu 395	Ile	Leu	Asn	Leu	Asn 400	Asn	Ile	Ser	Ser	Asp 405
Arg	Ile	Gln	Leu	Met 410	Asn	Ser	Gly	Ile	Gly 415	Trp	Phe	Gln	Pro	Asp 420
Val	Leu	Lys	Asn	Ile 425	Ile	Thr	Glu	Ile	Ile 430	His	Ser	Ile	Leu	Leu 435
Pro	Asn	Gln	Asn	Gly 440	Lys	Leu	Arg	Ser	Gly 445	Val	Pro	Val	Ser	Leu 450
Val	Lys	Ala	Leu	Gly 455	Phe	Glu	Ala	Ala	Glu 460	Ser	Ser	Leu	Thr	Lys 465
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Pro Val Ser Gln

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<211> 335

<212> PRT

<213> Homo sapiens

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Val Ala Leu Leu Ile Val Cys Asp Val Pro Ser Ala Ser Ala Gln 20 25 30

Arg Lys Glu Met Val Leu Ser Glu Lys Val Ser Gln Leu Met 35

Glu Trp Thr Asn Lys Arg Pro Val Ile Arg Met Asn Gly Asp Lys 50 55 60

Phe Arg Arg Leu Val Lys Ala Pro Pro Arg Asn Tyr Ser Val Ile 65 70 75

Val Met Phe Thr Ala Leu Gln Leu His Arg Gln Cys Val Val Cys 80 85 90

Lys Gln Ala Asp Glu Glu Phe Gln Ile Leu Ala Asn Ser Trp Arg 95 100 105

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Phe Asp Glu Gly Ser Asp Val Phe Gln Met Leu Asn Met Asn Ser
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Gly Asp Thr Tyr Glu Leu Gln Val Arg Gly Phe Ser Ala Glu Gln
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Ile Ala Arg Trp Ile Ala Asp Arg Thr Asp Val Asn Ile Arg Val
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Ile Arg Pro Pro Asn Tyr Ala Gly Pro Leu Met Leu Gly Leu Leu
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Leu Ala Val Ile Gly Gly Leu Val Tyr Leu Arg Arg Ser Asn Met
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                200
Glu Phe Leu Phe Asn Lys Thr Gly Trp Ala Phe Ala Ala Leu Cys
Phe Val Leu Ala Met Thr Ser Gly Gln Met Trp Asn His Ile Arg
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                                     235
Gly Pro Pro Tyr Ala His Lys Asn Pro His Thr Gly His Val Asn
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Tyr Ile His Gly Ser Ser Gln Ala Gln Phe Val Ala Glu Thr His
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Ile Val Leu Leu Phe Asn Gly Gly Val Thr Leu Gly Met Val Leu
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Leu Cys Glu Ala Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys
                                     295
                                                         300
Ile Met Cys Val Ala Gly Ile Gly Leu Val Val Leu Phe Phe Ser
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<211> 2476

<212> DNA

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<211> 536

<212> PRT

<213> Homo sapiens

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35 40 45

Leu Thr Phe His Pro Gly Ser Gln Val Val Lys Leu Pro Phe Ile 50 55 60

Asn Phe Met Lys Thr Arg Gly Thr Ser Phe Leu Asn Ala Tyr Thr
65 70 75

Asn Ser Pro Ile Cys Cys Pro Ser Arg Ala Ala Met Trp Ser Gly Leu Phe Thr His Leu Thr Glu Ser Trp Asn Asn Phe Lys Gly Leu 100 Asp Pro Asn Tyr Thr Trp Met Asp Val Met Glu Arg His Gly Tyr Arg Thr Gln Lys Phe Gly Lys Leu Asp Tyr Thr Ser Gly His His Ser Ile Ser Asn Arg Val Glu Ala Trp Thr Arg Asp Val Ala 140 Phe Leu Leu Arg Gln Glu Gly Arg Pro Met Val Asn Leu Ile Arg 160 Asn Arg Thr Lys Val Arg Val Met Glu Arg Asp Trp Gln Asn Thr 170 175 Asp Lys Ala Val Asn Trp Leu Arg Lys Glu Ala Ile Asn Tyr Thr 190 Glu Pro Phe Val Ile Tyr Leu Gly Leu Asn Leu Pro His Pro Tyr 200 Pro Ser Pro Ser Ser Gly Glu Asn Phe Gly Ser Ser Thr Phe His 215 Thr Ser Leu Tyr Trp Leu Glu Lys Val Ser His Asp Ala Ile Lys Ile Pro Lys Trp Ser Pro Leu Ser Glu Met His Pro Val Asp Tyr Tyr Ser Ser Tyr Thr Lys Asn Cys Thr Gly Arg Phe Thr Lys Lys 260 Glu Ile Lys Asn Ile Arg Ala Phe Tyr Tyr Ala Met Cys Ala Glu 275 Thr Asp Ala Met Leu Gly Glu Ile Ile Leu Ala Leu His Gln Leu 300 290 Asp Leu Leu Gln Lys Thr Ile Val Ile Tyr Ser Ser Asp His Gly Glu Leu Ala Met Glu His Arg Gln Phe Tyr Lys Met Ser Met Tyr 330 320 Glu Ala Ser Ala His Val Pro Leu Leu Met Met Gly Pro Gly Ile 335 Lys Ala Gly Leu Gln Val Ser Asn Val Val Ser Leu Val Asp Ile 360 350 Tyr Pro Thr Met Leu Asp Ile Ala Gly Ile Pro Leu Pro Gln Asn

11110 000 11

				365					370					375
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Asn	Glu	His	Lys	Val 395	Lys	Asn	Leu	His	Pro 400	Pro	Trp	Ile	Leu	Ser 405
Glu	Phe	His	Gly	Cys 410	Asn	Val	Asn	Ala	Ser 415	Thr	Tyr	Met	Leu	Arg 420
Thr	Asn	His	Trp	Lys 425	Tyr	Ile	Ala	Tyr	Ser 430	Asp	Gly	Ala	Ser	Ile 435
Leu	Pro	Gln	Leu	Phe 440	Asp	Leu	Ser	Ser	Asp 445	Pro	Asp	Glu	Leu	Thr 450
Asn	Val	Ala	Val	Lys 455	Phe	Pro	Glu	Ile	Thr 460	Tyr	Ser	Leu	Asp	Gln 465
Lys	Leu	His	Ser	Ile 470	Ile	Asn	Tyr	Pro	Lys 475	Val	Ser	Ala	Ser	Val 480
His	Gln	Tyr	Asn	Lys 485	Glu	Gln	Phe	Ile	Lys 490	Trp	Lys	Gln	Ser	Ile 495
Gly	Gln	Asn	Tyr	Ser 500	Asn	Val	Ile	Ala	Asn 505	Leu	Arg	Trp	His	Gln 510
Asp	Trp	Gln	Lys	Glu 515	Pro	Arg	Lys	Tyr	Glu 520	Asn	Ala	Ile	Asp	Gln 525
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<211> 230

<212> PRT

<213> Homo sapiens

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60 50 55 Ile Thr Gln Cys Asp Ile Tyr Ser Thr Leu Leu Gly Leu Pro Ala Asp Ile Gln Ala Ala Gln Ala Met Met Val Thr Ser Ser Ala Ile 85 Ser Ser Leu Ala Cys Ile Ile Ser Val Val Gly Met Arg Cys Thr 95 Val Phe Cys Gln Glu Ser Arg Ala Lys Asp Arg Val Ala Val Ala 110 Gly Gly Val Phe Phe Ile Leu Gly Gly Leu Leu Gly Phe Ile Pro 130 125 Val Ala Trp Asn Leu His Gly Ile Leu Arg Asp Phe Tyr Ser Pro 145 Leu Val Pro Asp Ser Met Lys Phe Glu Ile Gly Glu Ala Leu Tyr 160 Leu Gly Ile Ile Ser Ser Leu Phe Ser Leu Ile Ala Gly Ile Ile 175 Leu Cys Phe Ser Cys Ser Ser Gln Arg Asn Arg Ser Asn Tyr Tyr 195 185 190 Asp Ala Tyr Gln Ala Gln Pro Leu Ala Thr Arg Ser Ser Pro Arg 205 Pro Gly Gln Pro Pro Lys Val Lys Ser Glu Phe Asn Ser Tyr Ser 225 215 Leu Thr Gly Tyr Val

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10 page 15 1 1

atctcccatc tccagtaaat gtgaaagcag aagacgtttt ccctgagaag 400 acatagaaag aaaatcaact ttcactaagg catctcagaa acataggcta 450 aggtaatatg tgtaccagta gagaagcctg aggaatttac aaaatgatgc 500 agctccaagc cattgtatgg cccatgtggg agactgatgg gacatggaga 550 atgacagtag attatcagga aataaataaa gtggttttc caatgtacac 600 acctgtaaaa 610

<210> 136

<211> 119

<212> PRT

<213> Homo sapiens

<400> 136

Met Val Pro Arg Ile Phe Ala Pro Ala Tyr Val Ser Val Cys Leu 1 5 10 15

Leu Leu Cys Pro Arg Glu Val Ile Ala Pro Ala Gly Ser Glu 20 25 30

Pro Trp Leu Cys Gln Pro Ala Pro Arg Cys Gly Asp Lys Ile Tyr 35 40 45

Asn Pro Leu Glu Gln Cys Cys Tyr Asn Asp Ala Ile Val Ser Leu 50 55 60

Ser Glu Thr Arg Gln Cys Gly Pro Pro Cys Thr Phe Trp Pro Cys
65 70 75

Phe Glu Leu Cys Cys Leu Asp Ser Phe Gly Leu Thr Asn Asp Phe 80 85 90

Val Val Lys Leu Lys Val Gln Gly Val Asn Ser Gln Cys His Ser 95 100 105

Ser Pro Ile Ser Ser Lys Cys Glu Ser Arg Arg Phe Pro 110 115

<210> 137

<211> 771

<212> DNA

<213> Homo sapiens

<400> 137

ctccactgca accaccaga gccatggete eccgaggetg categtaget 50 gtetttgcca ttttetgcat etccaggete etctgeteae acggagecee 100 agtggeecee atgacteett acctgatget gtgecageca eacaagagat 150 gtggggacaa gttetacgae eccetgeage actgttgeta tgatgatgee 200 gtegtgeett tggecaggae ecagaegtgt ggaaactgea ectteagagt 250

ctgctttgag cagtgctgcc cctggacctt catggtgaag ctgataaacc 300 agaactgcga ctcagcccgg acctcggatg acaggctttg tcgcagtgtc 350 agctaatgga acatcagggg aacgatgact cctggattct ccttcctggg 400 tgggcctgga gaaagaggct ggtgttacct gagatctggg atgctgagtg 450 gctgtttggg ggccagagaa acacacactc aactgcccac ttcattctgt 500 gacctgtctg aggcccaccc tgcagctgcc ctgaggaggc ccacaggtcc 550 ccttctagaa ttctggacag catgagatgc gtgtgctgat gggggcccag 600 ggactctgaa ccctcctgat gacccctatg gccaacatca acccggcacc 650 accccaaggc tggctggga acccttcacc cttctgtgag atttccatc 700 atctcaagtt ctcttctatc caggagcaaa gcacaggatc ataataaatt 750 tatgtactt ataaatgaaa a 771

<210> 138

<211> 110

<212> PRT

<213> Homo sapiens.

<400> 138

Met Ala Pro Arg Gly Cys Ile Val Ala Val Phe Ala Ile Phe Cys 1 5 10 15

Ile Ser Arg Leu Leu Cys Ser His Gly Ala Pro Val Ala Pro Met 20 25 30

Thr Pro Tyr Leu Met Leu Cys Gln Pro His Lys Arg Cys Gly Asp 35 40 45

Lys Phe Tyr Asp Pro Leu Gln His Cys Cys Tyr Asp Asp Ala Val 50 55

Val Pro Leu Ala Arg Thr Gln Thr Cys Gly Asn Cys Thr Phe Arg 65 70 75

Val Cys Phe Glu Gln Cys Cys Pro Trp Thr Phe Met Val Lys Leu .80 85 90

Ile Asn Gln Asn Cys Asp Ser Ala Arg Thr Ser Asp Asp Arg Leu 95 100 105

Cys Arg Ser Val Ser 110

<210> 139

<211> 2044

<212> DNA

<213> Homo sapiens

<400> 139

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<210> 140

<211> 311

<212> PRT

<213> Homo sapiens

<400> 140

Met Gly Val Pro Thr Ala Leu Glu Ala Gly Ser Trp Arg Trp Gly
1 5 10 15

Ser Leu Leu Phe Ala Leu Phe Leu Ala Ala Ser Leu Gly Pro Val 20 25 30

Ala Ala Phe Lys Val Ala Thr Pro Tyr Ser Leu Tyr Val Cys Pro
35 40 45

Glu Gly Gln Asn Val Thr Leu Thr Cys Arg Leu Leu Gly Pro Val 50 55 60

Asp Lys Gly His Asp Val Thr Phe Tyr Lys Thr Trp Tyr Arg Ser
65 70 75

Ser Arg Gly Glu Val Gln Thr Cys Ser Glu Arg Arg Pro Ile Arg 80 85 90

Asn Leu Thr Phe Gln Asp Leu His Leu His His Gly Gly His Gln
95 100 105

Ala Ala Asn Thr Ser His Asp Leu Ala Gln Arg His Gly Leu Glu 110 115 120

Ser Ala Ser Asp His His Gly Asn Phe Ser Ile Thr Met Arg Asn 125 130 135

Leu Thr Leu Leu Asp Ser Gly Leu Tyr Cys Cys Leu Val Val Glu

			140					145					150
Ile Arg	His	His	His 155	Ser	Glu	His	Arg	Val 160	His	Gly	Ala	Met	Glu 165
Leu Gln	Val	Gln	Thr 170	Gly	Lys	Asp	Ala	Pro 175	Ser	Asn	Cys	Val	Val 180
Tyr Pro	Ser	Ser	Ser 185	Gln	Asp	Ser	Glu	Asn 190	Ile	Thr	Ala	Ala	Ala 195
Leu Ala	Thr	Gly	Ala 200	Cys	Ile	Val	Gly	Ile 205	Leu	Cys	Leu	Pro	Leu 210
Ile Leu	Leu	Leu	Val 215	Tyr	Lys	Gln	Arg	Gln 220	Ala	Ala	Ser	Asn	Arg 225
Arg Ala	Gln	Glu	Leu 230	Val	Arg	Met	Asp	Ser 235	Asn	Ile	Gln	Gly	Ile 240
Glu Asn	Pro	Gly	Phe 245	Glu	Ala	Ser	Pro	Pro 250	Ala	Gln	Gly	Ile	Pro 255
Glu Ala	Lys	Val	Arg 260	His	Pro	Leu	Ser	Tyr 265	Val	Ala	Gln	Arg	Gln 270
Pro Ser	Glu	Ser	Gly 275	Arg	His	Leu	Leu	Ser 280	Glu	Pro	Ser	Thr	Pro 285
Leu Ser	Pro	Pro	Gly 290	Pro	Gly	Asp	Val	Phe 295	Phe	Pro	Ser	Leu	Asp 300
Pro Val	Pro	Asp	Ser 305	Pro	Asn	Phe	Glu	Val 310	Ile				
<210> 141 <211> 1732 <212> DNA													

<213> Homo sapiens

<400> 141 cccacgcgtc cgcgcctctc ccttctgctg gaccttcctt cgtctctcca 50 tototocotc otttococgc gttotottto cacctttotc ttottocoac 100 cttagacctc ccttcctgcc ctcctttcct gcccaccgct gcttcctggc 150 cettetecga eccegeteta geageagace teetggggte tgtgggttga 200 tetgtggccc etgtgcctcc gtgtcctttt egteteett eeteecgaet 250 ccgctcccgg accagcggcc tgaccctggg gaaaggatgg ttcccgaggt 300 gagggtcctc tcctccttgc tgggactcgc gctgctctgg ttccccctgg 350 actcccacgc tcgagcccgc ccagacatgt tctgcctttt ccatgggaag 400 agatactccc ccggcgagag ctggcacccc tacttggagc cacaaggcct 450

gatgtactgc ctgcgctgta cctgctcaga gggcgcccat gtgagttgtt 500 accgecteca etgteegeet gteeactgee eccageetgt gaeggageea 550 cagcaatgct gtcccaagtg tgtggaacct cacactccct ctggactccg 600 ggccccacca aagtcctgcc agcacaacgg gaccatgtac caacacggag 650 agatetteag tgeceatgag etgtteeeet eeegeetgee caaccagtgt 700 gtcctctgca gctgcacaga gggccagatc tactgcggcc tcacaacctg 750 ccccgaacca ggctgcccag cacccctccc actgccagac tcctgctgcc 800 aagcctgcaa agatgaggca agtgagcaat cggatgaaga ggacagtgtg 850 cagtcgctcc atggggtgag acatcctcag gatccatgtt ccagtgatgc 900 tgggagaaag agaggcccgg gcaccccagc ccccactggc ctcagcgccc 950 ctctgagctt catccctcgc cacttcagac ccaagggagc aggcagcaca 1000 actgtcaaga tcgtcctgaa ggagaaacat aagaaagcct gtgtgcatgg 1050 cgggaagacg tactcccacg gggaggtgtg gcacccggcc ttccgtgcct 1100 teggeceett geeetgeate etatgeacet gtgaggatgg eegeeaggae 1150 tgccagcgtg tgacctgtcc caccgagtac ccctgccgtc accccgagaa 1200 agtggctggg aagtgctgca agatttgccc agaggacaaa gcagaccctg 1250 gccacagtga gatcagttct accaggtgtc ccaaggcacc gggccgggtc 1300 ctcgtccaca catcggtatc cccaagccca gacaacctgc gtcgctttgc 1350 cctggaacac gaggcctcgg acttggtgga gatctacctc tggaagctgg 1400 taaaagatga ggaaactgag gctcagagag gtgaagtacc tggcccaagg 1450 ccacacagcc agaatcttcc acttgactca gatcaagaaa gtcaggaagc 1500 aagacttcca gaaagaggca cagcacttcc gactgctcgc tggcccccac 1550 gaaggtcact ggaacgtctt cctagcccag accctggagc tgaaggtcac 1600 ggccagtcca gacaaagtga ccaagacata acaaagacct aacagttgca 1650 gatatgagct gtataattgt tgttattata tattaataaa taagaagttg 1700 cattaccctc aaaaaaaaaa aaaaaaaaaa aa 1732

<210> 142

<211> 451

<212> PRT

<213> Homo sapiens

<400> 142

Met Val Pro Glu Val Arg Val Leu Ser Ser Leu Leu Gly Leu Ala Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp Met Phe Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg 100 Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His 115 Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro 135 130 Asn Gln Cys Val Leu Cys Ser Cys Thr Glu Gly Gln Ile Tyr Cys Gly Leu Thr Thr Cys Pro Glu Pro Gly Cys Pro Ala Pro Leu Pro Leu Pro Asp Ser Cys Cys Gln Ala Cys Lys Asp Glu Ala Ser Glu 175 Gln Ser Asp Glu Glu Asp Ser Val Gln Ser Leu His Gly Val Arg 190 His Pro Gln Asp Pro Cys Ser Ser Asp Ala Gly Arg Lys Arg Gly 205 Pro Gly Thr Pro Ala Pro Thr Gly Leu Ser Ala Pro Leu Ser Phe 225 Ile Pro Arg His Phe Arg Pro Lys Gly Ala Gly Ser Thr Thr Val 235 Lys Ile Val Leu Lys Glu Lys His Lys Lys Ala Cys Val His Gly 255 Gly Lys Thr Tyr Ser His Gly Glu Val Trp His Pro Ala Phe Arg 265 Ala Phe Gly Pro Leu Pro Cys Ile Leu Cys Thr Cys Glu Asp Gly 285 Arg Gln Asp Cys Gln Arg Val Thr Cys Pro Thr Glu Tyr Pro Cys

	290		295	300
Arg His Pro G	lu Lys Val A 305	Ala Gly Lys	Cys Cys Lys Ile 310	e Cys Pro 315
Glu Asp Lys A	la Asp Pro (320	Gly His Ser	Glu Ile Ser Se: 325	r Thr Arg 330
Cys Pro Lys A	la Pro Gly 1 335	Arg Val Leu	Val His Thr Se 340	r Val Ser 345
Pro Ser Pro A	sp Asn Leu A 350	Arg Arg Phe	Ala Leu Glu Hi 355	s Glu Ala 360
Ser Asp Leu V	al Glu Ile : 365	Tyr Leu Trp	Lys Leu Val Ly 370	s Asp Glu 375
Glu Thr Glu A	la Gln Arg (380	Gly Glu Val	Pro Gly Pro Are 385	g Pro His 390
Ser Gln Asn L	eu Pro Leu 7 395	Asp Ser Asp	Gln Glu Ser Gl: 400	n Glu Ala 405
Arg Leu Pro G	lu Arg Gly 1 410	Thr Ala Leu	Pro Thr Ala Ar 415	g Trp Pro 420
Pro Arg Arg S	er Leu Glu 2 425	Arg Leu Pro	Ser Pro Asp Pr 430	o Gly Ala 435
Glu Gly His G	ly Gln Ser 1 440	Arg Gln Ser	Asp Gln Asp Il 445	e Thr Lys 450

Thr

<210> 143 <211> 693 <212> DNA <213> Homo sapiens

<400> 143
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cttgeggaaa atgetgatet cagtegeaat getgggegea ggggetggeg 150
tgggetaege geteetegtt ategtgaeee egggagageg geggaageag 200
gaaatgetaa aggagatgee actgeaggae ecaaggagea gggaggagge 250
ggecaggaee cageagetat tgetggeeae tetgeaggag geagegaeea 300
cgeaggagaa egtggeetgg aggaagaaet ggatggttgg eggegaagge 350
ggegeeageg ggaggteaee gtgagaeegg acttgeetee gtgggegeeg 400
gaeettgget tgggegeagg aateegagge ageetttete ettegtgge 450

<210> 144

<211> 93

<212> PRT

<213> Homo sapiens

<400> 144

Met Asp Ser Leu Arg Lys Met Leu Ile Ser Val Ala Met Leu Gly 1 5 10 15

Ala Gly Ala Gly Val Gly Tyr Ala Leu Leu Val Ile Val Thr Pro $20 \\ 25 \\ 30$

Gly Glu Arg Arg Lys Gln Glu Met Leu Lys Glu Met Pro Leu Gln
35 40 45

Asp Pro Arg Ser Arg Glu Glu Ala Ala Arg Thr Gln Gln Leu Leu 50 55 60

Leu Ala Thr Leu Gln Glu Ala Ala Thr Thr Gln Glu Asn Val Ala 65 70 75

Trp Arg Lys Asn Trp Met Val Gly Gly Glu Gly Gly Ala Ser Gly 80 85 90

Arg Ser Pro

<210> 145

<211> 1883

<212> DNA

<213> Homo sapiens

<400> 145

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caggctgcca tggggcccag cacccctctc ctcatcttgt tccttttgtc 150
atggtcggga cccctccaag gacagcagca ccaccttgtg gagtacatgg 200
aacgccgact agctgctta gaggaacggc tggcccagtg ccaggaccag 250
agtagtcggc atgctgctga gctgcgggac ttcaagaaca agatgctgcc 300
actgctggag gtggcagaga aggagcggga ggcactcaga actgaggccg 350
acaccatctc cgggagagtg gatcgtctgg agcggaggt agactatctg 400

IITH

gagacccaga acccagctct gccctgtgta gagtttgatg agaaggtgac 450 tggaggccct gggaccaaag gcaagggaag aaggaatgag aagtacgata 500 tggtgacaga ctgtggctac acaatctctc aagtgagatc aatgaagatt 550 ctgaagcgat ttggtggccc agctggtcta tggaccaagg atccactggg 600 gcaaacagag aagatctacg tgttagatgg gacacagaat gacacagcct 650 ttgtcttccc aaggetgcgt gacttcaccc ttgccatggc tgcccggaaa 700 gcttcccgag tccgggtgcc cttcccctgg gtaggcacag ggcagctggt 750 atatggtggc tttctttatt ttgctcggag gcctcctgga agacctggtg 800 gaggtggtga gatggagaac actttgcagc taatcaaatt ccacctggca 850 aaccgaacag tggtggacag ctcagtattc ccagcagagg ggctgatccc 900 cccctacggc ttgacagcag acacctacat cgacctggta gctgatgagg 950 aaggtetttg ggetgtetat gecaeeeggg aggatgaeag geaettgtgt 1000 ctggccaagt tagatccaca gacactggac acagagcagc agtgggacac 1050 accatgtccc agagagaatg ctgaggctgc ctttgtcatc tgtgggaccc 1100 tctatgtcgt ctataacacc cgtcctgcca gtcgggcccg catccagtgc 1150 tcctttgatg ccagcggcac cctgacccct gaacgggcag cactccctta 1200 ttttccccgc agatatggtg cccatgccag cctccgctat aacccccgag 1250 aacgccagct ctatgcctgg gatgatggct accagattgt ctataagctg 1300 gagatgagga agaaagagga ggaggtttga ggagctagcc ttgttttttg 1350 catctttctc actcccatac atttatatta tatccccact aaatttcttg 1400 ttcctcattc ttcaaatgtg ggccagttgt ggctcaaatc ctctatattt 1450 ttagccaatg gcaatcaaat tctttcagct cctttgtttc atacggaact 1500 ccagatcctg agtaatcctt ttagagcccg aagagtcaaa accctcaatg 1550 ttccctcctg ctctcctgcc ccatgtcaac aaatttcagg ctaaggatgc 1600 cccagaccca gggctctaac cttgtatgcg ggcaggccca gggagcaggc 1650 agcagtgttc ttcccctcag agtgacttgg ggagggagaa ataggaggag 1700 acgtccaget etgteetete tteeteacte etecetteag tgteetgagg 1750 aacaggactt tctccacatt gttttgtatt gcaacatttt gcattaaaag 1800

aaaaaaaaa aaaaaaaaa aaaaaaaaa aaa 1883

<210>	146
<211>	406

<212> PRT

<213> Homo sapiens

<400> 146

Met Gly Pro Ser Thr Pro Leu Leu Ile Leu Phe Leu Leu Ser Trỳ
1 5 10 15

Ser Gly Pro Leu Gln Gly Gln Gln His His Leu Val Glu Tyr Met 20 25 30

Glu Arg Arg Leu Ala Ala Leu Glu Glu Arg Leu Ala Gln Cys Gln 35 40 45

Asp Gln Ser Ser Arg His Ala Ala Glu Leu Arg Asp Phe Lys Asn 50 55 60

Lys Met Leu Pro Leu Leu Glu Val Ala Glu Lys Glu Arg Glu Ala 65 70 75

Glu Arg Glu Val Asp Tyr Leu Glu Thr Gln Asn Pro Ala Leu Pro 95 100 105

Cys Val Glu Phe Asp Glu Lys Val Thr Gly Gly Pro Gly Thr Lys 110 115 120

Gly Tyr Thr Ile Ser Gln Val Arg Ser Met Lys Ile Leu Lys Arg 140 145 150

Phe Gly Gly Pro Ala Gly Leu Trp Thr Lys Asp Pro Leu Gly Gln 155 160 165

Thr Glu Lys Ile Tyr Val Leu Asp Gly Thr Gln Asn Asp Thr Ala 170 175 180

Phe Val Phe Pro Arg Leu Arg Asp Phe Thr Leu Ala Met Ala Ala 185 190 195

Arg Lys Ala Ser Arg Val Arg Val Pro Phe Pro Trp Val Gly Thr 200 205 210

Gly Gln Leu Val Tyr Gly Gly Phe Leu Tyr Phe Ala Arg Pro 215 220 225

Pro Gly Arg Pro Gly Gly Gly Gly Glu Met Glu Asn Thr Leu Gln 230 235 240

Leu Ile Lys Phe His Leu Ala Asn Arg Thr Val Val Asp Ser Ser 245 250 255

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Val Phe Pro Ala Glu Gly Leu Ile Pro Pro Tyr Gly Leu Thr Ala
Asp Thr Tyr Ile Asp Leu Val Ala Asp Glu Glu Gly Leu Trp Ala
                275
Val Tyr Ala Thr Arg Glu Asp Asp Arg His Leu Cys Leu Ala Lys
Leu Asp Pro Gln Thr Leu Asp Thr Glu Gln Gln Trp Asp Thr Pro
                305
                                     310
Cys Pro Arg Glu Asn Ala Glu Ala Ala Phe Val Ile Cys Gly Thr
                                                         330
                                     325
Leu Tyr Val Val Tyr Asn Thr Arg Pro Ala Ser Arg Ala Arg Ile
                                     340
Gln Cys Ser Phe Asp Ala Ser Gly Thr Leu Thr Pro Glu Arg Ala
                                                         360
                                     355
                350
Ala Leu Pro Tyr Phe Pro Arg Arg Tyr Gly Ala His Ala Ser Leu
                365
                                                         375
Arg Tyr Asn Pro Arg Glu Arg Gln Leu Tyr Ala Trp Asp Asp Gly
                                                         390
                380
Tyr Gln Ile Val Tyr Lys Leu Glu Met Arg Lys Lys Glu Glu Glu
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Val

<210> 147 <211> 2052 <212> DNA <213> Homo sapiens

<400> 147
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gttctcctct tctctctaat ccatccgtca cctctcctgt catccgtttc 150
catgccgtga ggtccattca cagaacacat ccatggctct catgctcagt 200
ttggttctga gtctcctcaa gctgggatca gggcagtggc aggtgtttgg 250
gccagacaag cctgtccagg ccttggtggg ggaggacgca gcattctcct 300
gtttcctgtc tcctaagacc aatgcagagg ccatggaagt gcggttcttc 350
aggggccagt tctctagcgt ggtccacctc tacagggacg ggaaggacca 400
gccatttatg cagatgccac agtatcaagg caggacaaaa ctggtgaagg 450
attctattgc ggaggggcgc atctctctga ggctggaaaa cattactgtg 500

ttggatgctg gcctctatgg gtgcaggatt agttcccagt cttactacca 550 gaaggccatc tgggagctac aggtgtcagc actgggctca gttcctctca 600 tttccatcac gggatatgtt gatagagaca tccagctact ctgtcagtcc 650 tegggetggt teeceeggee cacagegaag tggaaaggte cacaaggaca 700 ggatttgtcc acagactcca ggacaaacag agacatgcat ggcctgtttg 750 atgtggagat ctctctgacc gtccaagaga acgccgggag catatcctgt 800 tccatgcggc atgctcatct gagccgagag gtggaatcca gggtacagat 850 aggagatacc tttttcgagc ctatatcgtg gcacctggct accaaagtac 900 tgggaatact ctgctgtggc ctattttttg gcattgttgg actgaagatt 950 ttcttctcca aattccagtg gaaaatccag gcggaactgg actggagaag 1000 aaagcacgga caggcagaat tgagagacgc ccggaaacac gcagtggagg 1050 tgactctgga tccagagacg gctcacccga agctctgcgt ttctgatctg 1100 aaaactgtaa cccatagaaa agctccccag gaggtgcctc actctgagaa 1150 gagatttaca aggaagagtg tggtggcttc tcagagtttc caagcaggga 1200 aacattactg ggaggtggac ggaggacaca ataaaaggtg gcgcgtggga 1250 gtgtgccggg atgatgtgga caggaggaag gagtacgtga ctttgtctcc 1300 cgatcatggg tactgggtcc tcagactgaa tggagaacat ttgtatttca 1350 cattaaatcc ccgttttatc agcgtcttcc ccaggacccc acctacaaaa 1400 ataggggtct tcctggacta tgagtgtggg accatctcct tcttcaacat 1450 aaatgaccag toocttattt ataccotgac atgtoggttt gaaggottat 1500 tgaggcccta cattgagtat ccgtcctata atgagcaaaa tggaactccc 1550 atagtcatct gcccagtcac ccaggaatca gagaaagagg cctcttggca 1600 aagggcctct gcaatcccag agacaagcaa cagtgagtcc tcctcacagg 1650 caaccacgcc cttcctcccc aggggtgaaa tgtaggatga atcacatccc 1700 acattettet ttagggatat taaggtetet eteccagate caaagteeeg 1750 cagcagccgg ccaaggtggc ttccagatga agggggactg gcctgtccac 1800 atgggagtca ggtgtcatgg ctgccctgag ctgggaggga agaaggctga 1850 cattacattt agtttgctct cactccatct ggctaagtga tcttgaaata 1900 ccacctctca ggtgaagaac cgtcaggaat tcccatctca caggctgtgg 1950

tgtagattaa gtagacaagg aatgtgaata atgcttagat cttattgatg 2000 acagagtgta tcctaatggt ttgttcatta tattacactt tcagtaaaaa 2050 aa 2052

<210> 148

<211> 500

<212> PRT

<213> Homo sapiens

<400> 148

Met Ala Leu Met Leu Ser Leu Val Leu Ser Leu Leu Lys Leu Gly
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Ser Gly Gln Trp Gln Val Phe Gly Pro Asp Lys Pro Val Gln Ala 20 25 30

Leu Val Gly Glu Asp Ala Ala Phe Ser Cys Phe Leu Ser Pro Lys 35 40 45

Thr Asn Ala Glu Ala Met Glu Val Arg Phe Phe Arg Gly Gln Phe 50 55 60

Ser Ser Val Val His Leu Tyr Arg Asp Gly Lys Asp Gln Pro Phe
65 70 75

Met Gln Met Pro Gln Tyr Gln Gly Arg Thr Lys Leu Val Lys Asp 80 85 90

Ser Ile Ala Glu Gly Arg Ile Ser Leu Arg Leu Glu Asn Ile Thr 95 100 105

Val Leu Asp Ala Gly Leu Tyr Gly Cys Arg Ile Ser Ser Gln Ser 110 115

Tyr Tyr Gln Lys Ala Ile Trp Glu Leu Gln Val Ser Ala Leu Gly
125 130 135

Ser Val Pro Leu Ile Ser Ile Thr Gly Tyr Val Asp Arg Asp Ile 140 $$ 145 $$ 150

Gln Leu Cys Gln Ser Ser Gly Trp Phe Pro Arg Pro Thr Ala 155 160 165

Lys Trp Lys Gly Pro Gln Gly Gln Asp Leu Ser Thr Asp Ser Arg 170 175

Thr Asn Arg Asp Met His Gly Leu Phe Asp Val Glu Ile Ser Leu 185 190 195

Thr Val Gln Glu Asn Ala Gly Ser Ile Ser Cys Ser Met Arg His 200 205 210

Ala His Leu Ser Arg Glu Val Glu Ser Arg Val Gln Ile Gly Asp 215 220 225

Thr Phe Phe Glu Pro Ile Ser Trp His Leu Ala Thr Lys Val Leu

* O TITLE - 100

				230					235					240
Gly	Ile	Leu	Cys	Cys 245	Gly	Leu	Phe	Phe	Gly 250	Ile	Val	Gly	Leu	Lys 255
Ile	Phe	Phe	Ser	Lys 260	Phe	Gln	Trp	Lys	Ile 265	Gln	Ala	Glu	Leu	Asp 270
Trp	Arg	Arg	Lys	His 275	Gly	Gln	Ala	Glu	Leu 280	Arg	Asp	Ala	Arg	Lys 285
His .	Ala	Val	Glu	Val 290	Thr	Leu	Asp	Pro	Glu 295	Thr	Ala	His	Pro	Lys 300
Leu	Cys	Val	Ser	Asp 305	Leu	Lys	Thr	Val	Thr 310	His	Arg	Lys	Ala	Pro 315
Gln	Glu	Val	Pro	His 320	Ser	Glu	Lys	Arg	Phe 325	Thr	Arg	Lys	Ser	Val 330
Val	Ala	Ser	Gln	Ser 335	Phe	Gln	Ala	Gly	Lys 340	His	Tyr	Trp	Glu	Val 345
Asp	Gly	Gly	His	Asn 350	Lys	Arg	Trp	Arg	Val 355	Gly	Val	Cys	Arg	Asp 360
Asp	Val	Asp	Arg	Arg 365	Lys	Glu	Tyr	Val	Thr 370	Leu	Ser	Pro	Asp	His 375
Gly	Tyr	Trp	Val	Leu 380	Arg	Leu	Asn	Gly	Glu 385	His	Leu	Tyr	Phe	Thr 390
Leu	Asn	Pro	Arg	Phe 395	Ile	Ser	Val	Phe	Pro 400	Arg	Thr	Pro	Pro	Thr 405
Lys	Ile	Gly	Val	Phe 410	Leu	Asp	Tyr	Glu	Cys 415	Gly	Thr	Ile	Ser	Phe 420
Phe	Asn	Ile	Asn	Asp 425	Gln	Ser	Leu	Ile	Tyr 430	Thr	Leu	Thr	Cys	Arg 435
Phe	Glu	Gly	Leu	Leu 440	Arg	Pro	Tyr	Ile	Glu 445	Tyr	Pro	Ser	Tyr	Asn 450
Glu	Gln	Asn	Gly	Thr 455	Pro	Ile	Val	Ile	Cys 460		Val	Thr	Gln	Glu 465
Ser	Glu	Lys	Glu	Ala 470	Ser	Trp	Gln	Arg	Ala 475		Ala	Ile	Pro	Glu 480
Thr	Ser	Asn	Ser	Glu 485	Ser	Ser	Ser	Gln	Ala 490	Thr	Thr	Pro	Phe	Leu 495
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<222> 1-45
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 aatgaatggc ggagccgagc gcgccatgag gagcctgccg agcctgggcg 150
 gcctcgccct gttgtgctgc gccgccgccg ccgccgccgt cgcctcagcc 200
 gcctcggcgg ggaatgtcac cggtggcggc ggggccgcgg ggcaggtgga 250
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 gggcgacggc tcccacggcc caggccccga ggaccgggcc cccgcgcgcc 350
 acceptccace gaccectgge tgcgacttet ccageccagt ecceggagae 400
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<211> 258

<212> PRT

<213> Homo sapiens

<400> 153

Met Arg Ser Leu Pro Ser Leu Gly Gly Leu Ala Leu Leu Cys Cys
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Ala Ala Ala Ala Ala Val Ala Ser Ala Ala Ser Ala Gly As
n $20 \hspace{1.5cm} 25 \hspace{1.5cm} 30$

Val Thr Gly Gly Gly Ala Ala Gly Gln Val Asp Ala Ser Pro 35 40 45

Gly Pro Gly Leu Arg Gly Glu Pro Ser His Pro Phe Pro Arg Ala 50 55 60

Thr Ala Pro Thr Ala Gln Ala Pro Arg Thr Gly Pro Pro Arg Ala 65 70 75

Thr Val His Arg Pro Leu Ala Ala Thr Ser Pro Ala Gln Ser Pro 80 85 90

Glu Thr Thr Pro Leu Trp Ala Thr Ala Gly Pro Ser Ser Thr Thr 95 100 105

Phe Gln Ala Pro Leu Gly Pro Ser Pro Thr Thr Pro Pro Ala Ala 110 115 120

Glu Arg Thr Ser Thr Thr Ser Gln Ala Pro Thr Arg Pro Ala Pro 125 130 135

Thr Thr Leu Ser Thr Thr Thr Gly Pro Ala Pro Thr Thr Pro Val

Ala Thr Thr Val Pro Ala Pro Thr Thr Pro Arg Thr Pro Thr Pro 155 160 165

Asp Leu Pro Ser Ser Ser Asn Ser Ser Val Leu Pro Thr Pro Pro

1 1 IBN 15

1/1

	170	175		180						
Ala Thr Glu Ala	Pro Ser Ser 185	Pro Pro Pro 190	Glu Tyr Val	Cys Asn 195						
Cys Ser Val Val	Gly Ser Leu 2	Asn Val Asn 205	Arg Cys Asn	Gln Thr 210						
Thr Gly Gln Cys	Glu Cys Arg 1 215	Pro Gly Tyr 220	Gln Gly Leu	His Cys 225						
Glu Thr Cys Lys	Glu Gly Phe 2	Tyr Leu Asn 235	Tyr Thr Ser	Gly Leu 240						
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Cys Asn Arg										
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<213> Homo sapiens

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ctggaccctg agcagcttct tgggccctgg tacgtgcttg cggtggcctc 150
ccgggaaaag ggctttgcca tggagaagga catgaagaac gtcgtggggg 200
tggtggtgac cctcactcca gaaaacaacc tgcggacgct gtcctctcag 250
cacgggctgg gagggtgta ccagagtgtc atggacctga taaagcgaaa 300
ctccggatgg gtgtttgaga atccctcaat aggcgtgctg gagctctggg 350
tgctggccac caacttcaga gactatgcca tcatcttcac tcagctggag 400
ttcggggacg agcccttcaa caccgtggag ctgtacagtc tgacggagac 450
agccagccag gaggccatgg ggctcttcac caagtggage aggagcctgg 500
gcttcctgtc acagtagcag gcccagctgc agaaggacct cacctgtgct 550
cacaagatcc ttctgtgagt gctgcgtccc cagtagggat ggcgcccaca 600
gggtcctgtg acctcggca gtgtccaccc acctcgctca gcggctcccg 650
gggcccagca ccagctcaga ataaagcgat tccacagca 689

<210> 158 <211> 163 <212> PRT <213> Homo sapiens

<400> 158

Met Gly Gly Leu Leu Ala Ala Phe Leu Ala Leu Val Ser Val 1 5 10 15

Pro Arg Ala Gln Ala Val Trp Leu Gly Arg Leu Asp Pro Glu Gln 20 25 30

Leu Leu Gly Pro Trp Tyr Val Leu Ala Val Ala Ser Arg Glu Lys
35 40 45

Gly Phe Ala Met Glu Lys Asp Met Lys Asn Val Val Gly Val Val 50 55 60

Val Thr Leu Thr Pro Glu Asn Asn Leu Arg Thr Leu Ser Ser Gln 65 70 75

His Gly Leu Gly Gly Cys Asp Gln Ser Val Met Asp Leu Ile Lys 80 85 90

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Arg Asn Ser Gly Trp Val Phe Glu Asn Pro Ser Ile Gly Val Leu 105
Glu Leu Trp Val Leu Ala Thr Asn Phe Arg Asp Tyr Ala Ile Ile 120
Phe Thr Gln Leu Glu Phe Gly Asp Glu Pro Phe Asn Thr Val Glu 135
Leu Tyr Ser Leu Thr Glu Thr Ala Ser Gln Glu Ala Met Gly Leu 150
Phe Thr Lys Trp Ser Arg Ser Leu Gly Phe Leu Ser Gln
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<211> 1665

<212> DNA

<213> Homo sapiens

<400> 159

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17 1911

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<211> 463

<211> 103

<213> Homo sapiens

<400> 160

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Glu Gly Gln Thr Ser Lys Leu Leu Thr Met Gln Ser Ser Val Thr
20 25 30

Val Gln Glu Gly Leu Cys Val His Val Pro Cys Ser Phe Ser Tyr 35 40 45

Pro Ser His Gly Trp Ile Tyr Pro Gly Pro Val Val His Gly Tyr 50 55 60

Trp Phe Arg Glu Gly Ala Asn Thr Asp Gln Asp Ala Pro Val Ala 65 70 75

Thr Asn Asn Pro Ala Arg Ala Val Trp Glu Glu Thr Arg Asp Arg 80 85

Phe His Leu Leu Gly Asp Pro His Thr Lys Asn Cys Thr Leu Ser 95 100 105

Ile Arg Asp Ala Arg Arg Ser Asp Ala Gly Arg Tyr Phe Phe Arg

				110					115					120
Met	Glu	Lys	Gly	Ser 125	Ile	Lys	Trp	Asn	Tyr 130	Lys	His	His	Arg	Leu 135
Ser	Val	Asn	Val	Thr 140	Ala	Leu	Thr	His	Arg 145	Pro	Asn	Ile	Leu	Ile 150
Pro	Gly	Thr	Leu	Glu 155	Ser	Gly	Суз	Pro	Gln 160	Asn	Leu	Thr	Cys	Ser 165
Val	Pro	Trp	Ala	Cys 170	Glu	Gln	Gly	Thr	Pro 175	Pro	Met	Ile	Ser	Trp 180
Ile	Gly	Thr	Ser	Val 185	Ser	Pro	Leu	Asp	Pro 190	Ser	Thr	Thr	Arg	Ser 195
Ser	Val	Leu	Thr	Leu 200	Ile	Pro	Gln	Pro	Gln 205	Asp	His	Gly	Thr	Ser 210
Leu	Thr	Cys	Gln	Val 215	Thr	Phe	Pro	Gly	Ala 220	Ser	Val	Thr	Thr	Asn 225
Lys	Thr	Val	His	Leu 230	Asn	Val	Ser	Tyr	Pro 235	Pro	Gln	Asn	Leu	Thr 240
Met	Thr	Val	Phe	Gln 245	Gly	Asp	Gly	Thr	Val 250	Ser	Thr	Val	Leu	Gly 255
Asn	Gly	Ser	Ser	Leu 260	Ser	Leu	Pro	Glu	Gly 265	Gln	Ser	Leu	Arg	Leu 270
Val	Суѕ	Ala	Val	Asp 275	Ala	Val	Asp	Ser	Asn 280	Pro	Pro	Ala	Arg	Leu 285
Ser	Leu	Ser	Trp	Arg 290	Gly	Leu	Thr	Leu	Cys 295	Pro	Ser	Gln	Pro	Ser 300
Asn	Pro	Gly	Val	Leu 305	Glu	Leu	Pro	Trp	Val 310	His	Leu	Arg	Asp	Ala 315
Ala	Glu	Phe	Thr	Cys 320	Arg	Ala	Gln	Asn	Pro 325	Leu	Gly	Ser	Gln	Gln 330
Val	Tyr	Leu	Asn	Val 335	Ser	Leu	Gln	Ser	Lys 340	Ala	Thr	Ser	Gly	Val 345
Thr	Gln	Gly	Val	Val 350	Gly	Gly	Ala	Gly	Ala 355	Thr	Ala	Leu	Val	Phe 360
Leu	Ser	Phe	Cys	Val 365	Ile	Phe	Val	Val	Val 370	Arg	Ser	Cys	Arg	Lys 375
Lys	Ser	Ala	Arg	Pro 380	Ala	Ala	Gly	Val	Gly 385	Asp	Thr	Gly	Ile	Glu 390
Asp	Ala	Asn	Ala	Val 395	Arg	Gly	Ser	Ala	Ser 400	Gln	Gly	Pro	Leu	Thr 405

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Glu Pro Trp Ala Glu Asp Ser Pro Pro Asp Gln Pro Pro Pro Ala 410 415 420

Ser Ala Arg Ser Ser Val Gly Glu Gly Glu Leu Gln Tyr Ala Ser 425 430 430
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Leu Ser Phe Gln Met Val Lys Pro Trp Asp Ser Arg Gly Gln Glu 440 445 450

Ala Thr Asp Thr Glu Tyr Ser Glu Ile Lys Ile His Arg
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<211> 739

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<213> Homo sapiens

<400> 161

<210> 162

<211> 170

<212> PRT

<213> Homo sapiens

<400> 162

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Leu Ser Phe Thr Leu Glu Glu Glu Asp Ile Thr Gly Thr Trp Tyr

20 25 30

Val Lys Ala Met Val Val Asp Lys Asp Phe Pro Glu Asp Arg Arg 35 40 45

Pro Arg Lys Val Ser Pro Val Lys Val Thr Ala Leu Gly Gly Gly 50 55 60

Lys Leu Glu Ala Thr Phe Thr Phe Met Arg Glu Asp Arg Cys Ile
65 70 75

Gln Lys Lys Ile Leu Met Arg Lys Thr Glu Glu Pro Gly Lys Tyr 80 85 90

Ser Ala Tyr Gly Gly Arg Lys Leu Met Tyr Leu Gln Glu Leu Pro 95 100 105

Arg Arg Asp His Tyr Ile Phe Tyr Cys Lys Asp Gln His His Gly 110 115 120

Gly Leu Leu His Met Gly Lys Leu Val Gly Arg Asn Ser Asp Thr 125 130 135

Asn Arg Glu Ala Leu Glu Glu Phe Lys Lys Leu Val Gln Arg Lys 140 145 150

Gly Leu Ser Glu Glu Asp Ile Phe Thr Pro Leu Gln Thr Gly Ser 155 160 165

Cys Val Pro Glu His 170

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<211> 22

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<222> 1-22

<223> Synthetic construct.

<400> 163

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<210> 164

<211> 26

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-26

<223> Synthetic construct.

<400> 164

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<400> 169

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<222> 1-21
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<211> 25
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<222> 1-25
<223> Synthetic construct.
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<211> 50
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<222> 1-50
<223> Synthetic construct.
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<210> 168
<211> 45
<212> DNA
<213> Artificial
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<222> 1-45
<223> Synthetic construct.
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<212> DNA
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aggccatgag gattctgcag ttaatcctgc ttgctctggc aacagggctt 150
gtagggggag agaccaggat catcaagggg ttcgagtgca agcctcactc 200
ccagccctgg caggcagccc tgttcgagaa gacgcggcta ctctgtgggg 250
cgacgeteat egececaga tggeteetga cageageeca etgeeteaag 300
ccccgctaca tagttcacct ggggcagcac aacctccaga aggaggaggg 350
ctqtqaqcaq acccqqacaq ccactqaqtc cttcccccac cccqgcttca 400
acaacagcct ccccaacaaa gaccaccgca atgacatcat gctggtgaag 450
atggcatcgc cagtctccat cacctgggct gtgcgacccc tcaccctctc 500
ctcacgctgt gtcactgctg gcaccagctg cctcatttcc ggctggggca 550
gcacgtccag ccccagtta cgcctgcctc acaccttgcg atgcgccaac 600
atcaccatca ttgagcacca gaagtgtgag aacgcctacc ccggcaacat 650
cacagacacc atggtgtgtg ccagcgtgca ggaagggggc aaggactcct 700
qccaqqqtqa ctccqqqqqc cctctqqtct qtaaccagtc tcttcaaggc 750
attatctcct ggggccagga tccgtgtgcg atcacccgaa agcctggtgt 800
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acaattagac tggacccacc caccacagcc catcaccctc catttccact 900
tqqtqtttqq ttcctqttca ctctqttaat aagaaaccct aagccaagac 950
cctctacgaa cattctttgg gcctcctgga ctacaggaga tgctgtcact 1000
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His Ser Gln Pro Trp Gln Ala Ala Leu Phe Glu Lys Thr Arg Leu
Leu Cys Gly Ala Thr Leu Ile Ala Pro Arg Trp Leu Leu Thr Ala
Ala His Cys Leu Lys Pro Arg Tyr Ile Val His Leu Gly Gln His
Asn Leu Gln Lys Glu Glu Gly Cys Glu Gln Thr Arg Thr Ala Thr
Glu Ser Phe Pro His Pro Gly Phe Asn Asn Ser Leu Pro Asn Lys
                                     100
Asp His Arg Asn Asp Ile Met Leu Val Lys Met Ala Ser Pro Val
                                     115
                 110
Ser Ile Thr Trp Ala Val Arg Pro Leu Thr Leu Ser Ser Arg Cys
                                     130
Val Thr Ala Gly Thr Ser Cys Leu Ile Ser Gly Trp Gly Ser Thr
                 140
Ser Ser Pro Gln Leu Arg Leu Pro His Thr Leu Arg Cys Ala Asn
                                     160
Ile Thr Ile Ile Glu His Gln Lys Cys Glu Asn Ala Tyr Pro Gly
                 170
                                     175
Asn Ile Thr Asp Thr Met Val Cys Ala Ser Val Gln Glu Gly Gly
                                     190
Lys Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Asn
                 200
                                     205
Gln Ser Leu Gln Gly Ile Ile Ser Trp Gly Gln Asp Pro Cys Ala
                                     220
Ile Thr Arg Lys Pro Gly Val Tyr Thr Lys Val Cys Lys Tyr Val
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                                     235
Asp Trp Ile Gln Glu Thr Met Lys Asn Asn
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<212> DNA
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<211> 25

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-25

<223> Synthetic construct.

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<210> 172
<211> 24
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<400> 172
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<222> 1-18
<223> Synthetic construct.
<400> 173
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<210> 174
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<223> Synthetic construct.
<400> 174
 tctgtgatgt tgccggggta ggcg 24
<210> 175
<211> 25
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-25
<223> Synthetic construct.
<400> 175
 cgtgtagaca ccaggctttc gggtg 25
<210> 176
<211> 18
<212> DNA
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<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 176
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<210> 177
<211> 50
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<220>
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<222> 1-50
<223> Synthetic construct.
<400> 177
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<210> 178
<211> 43
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-43
<223> Synthetic construct.
<400> 178
 gagagaccag gatcatcaag gggttcgagt gcaagcctca ctc 43
<210> 179
<211> 907
<212> DNA
<213> Homo sapiens
<400> 179
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 aagaaagagg agagcaccga agaagtgaaa atagaagttt tgcatcgtcc 150
 agaaaactgc tctaagacaa gcaagaaggg agacctacta aatgcccatt 200
 atgacggcta cctggctaaa gacggctcga aattctactg cagccggaca 250
 caaaatgaag gccacccaa atggtttgtt cttggtgttg ggcaagtcat 300
 aaaaggccta gacattgcta tgacagatat gtgccctgga gaaaagcgaa 350
 aagtagttat acccccttca tttgcatacg gaaaggaagg ctatgcagaa 400
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10 10 10 1

ggcaagattc caccggatgc tacattgatt tttgagattg aactttatgc 450 tgtgaccaaa ggaccacgga gcattgagac atttaaacaa atagacatgg 500 acaatgacag gcagctctct aaagccgaga taaacctcta cttgcaaagg 550 gaatttgaaa aagatgagaa gccacgtgac aagtcatatc aggatgcagt 600 tttagaagat atttttaaga agaatgacca tgatggtgat ggcttcattt 650 ctcccaagga atacaatgta taccaacacg atgaactata gcatatttgt 700 atttctactt ttttttttta gctatttact gtactttatg tataaaacaa 750 agtcactttt ctccaagttg tatttgctat ttttccccta tgagaagata 800 ttttgatctc cccaatacat tgattttggt ataataaatg tgaggctgtt 850 aaaaaaa 907

<210> 180 <211> 222 <212> PRT

<213> Homo sapiens

<400> 180 Met Pro Lys Thr Met His Phe Leu Phe Arg Phe Ile Val Phe Phe Tyr Leu Trp Gly Leu Phe Thr Ala Gln Arg Gln Lys Lys Glu Glu Ser Thr Glu Glu Val Lys Ile Glu Val Leu His Arg Pro Glu Asn Cys Ser Lys Thr Ser Lys Lys Gly Asp Leu Leu Asn Ala His Tyr Asp Gly Tyr Leu Ala Lys Asp Gly Ser Lys Phe Tyr Cys Ser Arg Thr Gln Asn Glu Gly His Pro Lys Trp Phe Val Leu Gly Val Gly Gln Val Ile Lys Gly Leu Asp Ile Ala Met Thr Asp Met Cys Pro Gly Glu Lys Arg Lys Val Val Ile Pro Pro Ser Phe Ala Tyr Gly 115 Lys Glu Gly Tyr Ala Glu Gly Lys Ile Pro Pro Asp Ala Thr Leu 125 Ile Phe Glu Ile Glu Leu Tyr Ala Val Thr Lys Gly Pro Arg Ser 150

140

145

<213> Artificial

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Ser Lys Ala Glu Ile Asn Leu Tyr Leu Gln Arg Glu Phe Glu Lys
                                     175
Asp Glu Lys Pro Arg Asp Lys Ser Tyr Gln Asp Ala Val Leu Glu
Asp Ile Phe Lys Lys Asn Asp His Asp Gly Asp Gly Phe Ile Ser
                                     205
                 200
Pro Lys Glu Tyr Asn Val Tyr Gln His Asp Glu Leu
<210> 181
<211> 22
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<222> 1-22
<223> Synthetic construct.
<400> 181
 gtgttctgct ggagccgatg cc 22
<210> 182
<211> 18
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 182
 gacatggaca atgacagg 18
<210> 183
<211> 18
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 183
 cctttcagga tgtaggag 18
<210> 184
<211> 18
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<222> 1-18
<223> Synthetic construct.
<400> 184
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<211> 27
<212> DNA
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<221> Artificial Sequence
<222> 1-27
<223> Synthetic construct.
<400> 185
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<210> 186
<211> 24
<212> DNA
<213> Artificial
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<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 186
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<210> 187
<211> 52
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-52
<223> Synthetic construct.
<400> 187
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 cc 52
<210> 188
<211> 573
<212> DNA
<213> Homo sapiens
<400> 188
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 ctctttggag ctgtgactca gaaaaccaaa acttcctgtg ctaagtgccc 100
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THE MININGS OF STREET

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cccaaatget teetgtgtea ataacactea etgeacetge aaccatggat 150 atacttetgg atetgggeag aaactattea catteecett ggagacatgt 200 aacgecagge atggtggete gegeetgtaa teecagttet ttgggaagee 250 aaggeaggtg gateacetga ggteaggagt ttgagaceag cetggeeaae 300 atagtgaaae eccgtgteta etaaaaatae aaaaateage egggegtggt 350 ggtgeatgee tgeaateeca gttaeteggg aggetgagge aggagaateg 400 ettgaactea ggaggeagaa gttgeagtga acceagatee tgeeattgea 450 etecageatg gatgacagag caagacteeg teteaaaaag aaaagatagt 500 ttettgtte atttegegae tgeeetetea gtgtteetg ggateecete 550 ecaaataaag taettatatt ete 573
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<210> 189

<211> 74

<212> PRT

<213> Homo sapiens

<400> 189

Met Gln Gly Pro Leu Leu Leu Pro Gly Leu Cys Phe Leu Leu Ser
1 5 10 15

Leu Phe Gly Ala Val Thr Gln Lys Thr Lys Thr Ser Cys Ala Lys 20 25 30

Cys Pro Pro Asn Ala Ser Cys Val Asn Asn Thr His Cys Thr Cys
45

Asn His Gly Tyr Thr Ser Gly Ser Gly Gln Lys Leu Phe Thr Phe
50 55 60

Pro Leu Glu Thr Cys Asn Ala Arg His Gly Gly Ser Arg Leu 65 70

<210> 190

<211> 24

<212> DNA

<213> Artificial

<220>

<221> Artificial Sequence

<222> 1-24

<223> Synthetic construct.

<400> 190

agggaccatt gcttcttcca ggcc 24

<210> 191

<211> 24

<212> DNA

<213> Artificial

10 **W**

H

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<220>
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<222> 1-24
<223> Synthetic construct.
<400> 191
 cgttacatgt ctccaagggg aatg 24
<210> 192
<211> 50
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-50
<223> Synthetic construct.
<400> 192
 cctgtgctaa gtgcccccca aatgcttcct gtgtcaataa cactcactgc 50
<210> 193
<211> 1091
<212> DNA
<213> Homo sapiens
<400> 193
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 ggtggggggc acagggaaag ggtgacctct gagattcccc ttttccccca 100
 gactttggaa gtgacccacc atggggctca gcatcttttt gctcctgtgt 150
 gttcttgggc tcagccaggc agccacaccg aagattttca atggcactga 200
 gtgtgggcgt aactcacagc cgtggcaggt ggggctgttt gagggcacca 250
 gcctgcgctg cgggggtgtc cttattgacc acaggtgggt cctcacagcg 300
 gctcactgca gcggcagcag gtactgggtg cgcctggggg aacacagcct 350
 cagecagete gaetggaeeg ageagateeg geacagegge ttetetgtga 400
 cccatcccgg ctacctggga gcctcgacga gccacgagca cgacctccgg 450
 ctgctgcggc tgcgcctgcc cgtccgcgta accagcagcg ttcaacccct 500
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caaggtctgg tgtcctgggg gtctgtgggg ccctgtggac aagatggcat 800

ccctggagtc tacacctata tttgcaagta tgtggactgg atccggatga 850
tcatgaggaa caactgacct gtttcctcca cctccacccc caccccttaa 900
cttgggtacc cctctggccc tcagagcacc aatatctcct ccatcacttc 950
ccctagctcc actcttgttg gcctgggaac ttcttggaac tttaactcct 1000
gccagccctt ctaagaccca cgagcgggt gagagaagtg tgcaatagtc 1050
tggaataaat ataaatgaag gagggcaaa aaaaaaaaa a 1091

<210> 194

<211> 248

<212> PRT

<213> Homo sapiens

<400> 194

Met Gly Leu Ser Ile Phe Leu Leu Cys Val Leu Gly Leu Ser 1 5 10 15

Gln Ala Ala Thr Pro Lys Ile Phe Asn Gly Thr Glu Cys Gly Arg 20 25 30

Asn Ser Gln Pro Trp Gln Val Gly Leu Phe Glu Gly Thr Ser Leu 35 40 45

Arg Cys Gly Gly Val Leu Ile Asp His Arg Trp Val Leu Thr Ala
50 55 60

Ala His Cys Ser Gly Ser Arg Tyr Trp Val Arg Leu Gly Glu His
65 70 75

Ser Leu Ser Gln Leu Asp Trp Thr Glu Gln Ile Arg His Ser Gly 80 85

Phe Ser Val Thr His Pro Gly Tyr Leu Gly Ala Ser Thr Ser His 95 100 105

Glu His Asp Leu Arg Leu Leu Arg Leu Arg Leu Pro Val Arg Val 110 115

Thr Ser Ser Val Gln Pro Leu Pro Leu Pro Asn Asp Cys Ala Thr 125 130 135

Ala Gly Thr Glu Cys His Val Ser Gly Trp Gly Ile Thr Asn His 140 145 150

Pro Arg Asn Pro Phe Pro Asp Leu Leu Gln Cys Leu Asn Leu Ser 155 160 165

Ile Val Ser His Ala Thr Cys His Gly Val Tyr Pro Gly Arg Ile
170 175 180

Thr Ser Asn Met Val Cys Ala Gly Gly Val Pro Gly Gln Asp Ala 185 190 195

Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Gly Gly Val Leu

Gln Gly Leu Val Ser Trp Gly Ser Val Gly Pro Cys Gly Gln Asp 225

Gly Ile Pro Gly Val Tyr Thr Tyr Ile Cys Lys Tyr Val Asp Trp 230

Ile Arg Met Ile Met Arg Asn Asn 245

<210> 195 <211> 1485 <212> DNA

<213> Homo sapiens

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<211> 150

<212> PRT

<213> Homo sapiens

<400> 196

Met Ser Gly Glu Leu Ser Asn Arg Phe Gln Gly Gly Lys Ala Phe 1 5 10 15

Gly Leu Leu Lys Ala Arg Gln Glu Arg Arg Leu Ala Glu Ile Asn 20 25 30

Arg Glu Phe Leu Cys Asp Gln Lys Tyr Ser Asp Glu Glu Asn Leu
35 40 45

Pro Glu Lys Leu Thr Ala Phe Lys Glu Lys Tyr Met Glu Phe Asp 50 55 60

Leu Asn Asn Glu Gly Glu Ile Asp Leu Met Ser Leu Lys Arg Met 65 70 75

Met Glu Lys Leu Gly Val Pro Lys Thr His Leu Glu Met Lys Lys 80 85 90

Met Ile Ser Glu Val Thr Gly Gly Val Ser Asp Thr Ile Ser Tyr 95 100 105

Arg Asp Phe Val Asn Met Met Leu Gly Lys Arg Ser Ala Val Leu 110 115 120

Lys Leu Val Met Met Phe Glu Gly Lys Ala Asn Glu Ser Ser Pro $125 \hspace{1cm} 130 \hspace{1cm} 135$

<210> 197

<211> 4842

<212> DNA

<213> Homo sapiens

<400> 197 cgcgctcccc gcgcgcctcc tcgggctcca cgcgtcttgc cccgcagagg 50 cagectecte caggageggg geeetgeaca ceatggeece egggtgggea 100 ggggtcggcg ccgccgtgcg cgcccgcctg gcgctggcct tggcgctggc 150 gagegteetg agtgggeete eageegtege etgeeceace aagtgtaeet 200 geteegetge cagegtggae tgecaeggge tgggeeteeg egeggtteet 250 cggggcatcc cccgcaacgc tgagcgcctt gacctggaca gaaataatat 300 caccaggatc accaagatgg acttcgctgg gctcaagaac ctccgagtct 350 tgcatctgga agacaaccag gtcagcgtca tcgagagagg cgccttccag 400 gacctgaagc agctagagcg actgcgcctg aacaagaata agctgcaagt 450 ccttccagaa ttgcttttcc agagcacgcc gaagctcacc agactagatt 500 tgagtgaaaa ccagatccag gggatcccga ggaaggcgtt ccgcggcatc 550 accgatgtga agaacctgca actggacaac aaccacatca gctgcattga 600 agatggagcc ttccgagcgc tgcgcgattt ggagatcctt accctcaaca 650 acaacaacat cagtegeate etggteacea getteaacea catgeegaag 700 atccgaactc tgcgcctcca ctccaaccac ctctactgcg actgccacct 750 ggcctggctc tcggattggc tgcgacagcg acggacagtt ggccagttca 800 cactctgcat ggctcctgtg catttgaggg gcttcaacgt ggcggatgtg 850 cagaagaagg agtacgtgtg cccagcccc cactcggagc ccccatcctg 900 caatgccaac tecateteet gecettegee etgeaegtge ageaataaca 950 tcgtggactg tcgaggaaag ggcttgatgg agattcctgc caacttgccg 1000 gagggcatcg tcgaaatacg cctagaacag aactccatca aagccatccc 1050 tgcaggagcc ttcacccagt acaagaaact gaagcgaata gacatcagca 1100 agaatcagat atcggatatt gctccagatg ccttccaggg cctgaaatca 1150 ctcacatcgc tggtcctgta tgggaacaag atcaccgaga ttgccaaggg 1200 actgtttgat gggctggtgt ccctacagct gctcctcctc aatgccaaca 1250 agatcaactg cctgcgggtg aacacgtttc aggacctgca gaacctcaac 1300 ttgctctccc tgtatgacaa caagctgcag accatcagca aggggctctt 1350 cgcccctctg cagtccatcc agacactcca cttagcccaa aacccatttg 1400 tgtgcgactg ccacttgaag tggctggccg actacctcca ggacaacccc 1450

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gctgtgcctg cccctacagc tacaagggca aggactgcac tgtgcccatc 2950 aacacctgca tccagaaccc ctgtcagcat ggaggcacct gccacctgag 3000 tgacagccac aaggatgggt tcagctgctc ctgccctctg ggctttgagg 3050 ggcagcggtg tgagatcaac ccagatgact gtgaggacaa cgactgcgaa 3100 aacaatgcca cctgcgtgga cgggatcaac aactacgtgt gtatctgtcc 3150 gcctaactac acaggtgagc tatgcgacga ggtgattgac cactgtgtgc 3200 ctgagctgaa cctctgtcag catgaggcca agtgcatccc cctggacaaa 3250 ggattcagct gcgagtgtgt ccctggctac agcgggaagc tctgtgagac 3300 agacaatgat gactgtgtgg cccacaagtg ccgccacggg gcccagtgcg 3350 tggacacaat caatggctac acatgcacct gcccccaggg cttcagtgga 3400 cccttctgtg aacaccccc acccatggtc ctactgcaga ccagcccatg 3450 cgaccagtac gagtgccaga acggggccca gtgcatcgtg gtgcagcagg 3500 agcccacctg ccgctgccca ccaggcttcg ccggccccag atgcgagaag 3550 ctcatcactg tcaacttcgt gggcaaagac tcctacgtgg aactggcctc 3600 cgccaaggtc cgaccccagg ccaacatctc cctgcaggtg gccactgaca 3650 aggacaacgg catcettete tacaaaggag acaatgacce cetggcactg 3700 gagetgtace agggeeacgt geggetggte tatgaeagee tgagtteece 3750 tccaaccaca gtgtacagtg tggagacagt gaatgatggg cagtttcaca 3800 gtgtggagct ggtgacgcta aaccagaccc tgaacctagt agtggacaaa 3850 ggaactccaa agagcctggg gaagctccag aagcagccag cagtgggcat 3900 caacageece etetacettg gaggeatece caectecace ggeeteteeg 3950 cettgegeca gggeaeggae eggeetetag geggetteea eggatgeate 4000 catgaggtgc gcatcaacaa cgagctgcag gacttcaagg ccctcccacc 4050 acagtccctg ggggtgtcac caggctgcaa gtcctgcacc gtgtgcaagc 4100 acggcctgtg ccgctccgtg gagaaggaca gcgtggtgtg cgagtgccgc 4150 ccaggctgga ccggcccact ctgcgaccag gaggcccggg acccctgcct 4200 cggccacaga tgccaccatg gaaaatgtgt ggcaactggg acctcataca 4250 tgtgcaagtg tgccgagggc tatggagggg acttgtgtga caacaagaat 4300 gactctgcca atgcctgctc agccttcaag tgtcaccatg ggcagtgcca 4350 catctcagac caagggagc cctactgcct gtgccagccc ggctttagcg 4400 gcgagcactg ccaacaagag aatccgtgcc tgggacaagt agtccgagag 4450 gtgatccgcc gccagaaagg ttatgcatca tgtgccacag cctccaaggt 4500 gcccatcatg gaatgtcgtg ggggctgtgg gccccagtgc tgccagccca 4550 cccgcagcaa gcggcggaaa tacgtcttcc agtgcacgga cggctcctcg 4600 tttgtagaag aggtggagag acacttagag tgcggctgcc tcgcgtgttc 4650 ctaagcccct gcccgcctgc ctgccacctc tcggactcca gcttgatgga 4700 gttgggacag ccatgtgga ccccctggtg attcagcatg aaggaaatga 4750 agctggagag gaaggtaaag aagaagagaa tattaagtat attgtaaaat 4800 aaacaaaaaa tagaacttaa aaaaaaaaaa aaaaaaaaa aa 4842

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<211> 1523

<212> PRT

<213> Homo sapiens

<400> 198

Met Ala Pro Gly Trp Ala Gly Val Gly Ala Ala Val Arg Ala Arg 1 5 10 15

Leu Ala Leu Ala Leu Ala Ser Val Leu Ser Gly Pro Pro 20 25 30

Ala Val Ala Cys Pro Thr Lys Cys Thr Cys Ser Ala Ala Ser Val 35 40 45

Asp Cys His Gly Leu Gly Leu Arg Ala Val Pro Arg Gly Ile Pro 50 55 60

Arg Asn Ala Glu Arg Leu Asp Leu Asp Arg Asn Asn Ile Thr Arg
65 70 75

Ile Thr Lys Met Asp Phe Ala Gly Leu Lys Asn Leu Arg Val Leu 80 85 90

His Leu Glu Asp Asn Gln Val Ser Val Ile Glu Arg Gly Ala Phe 95 100 105

Gln Asp Leu Lys Gln Leu Glu Arg Leu Arg Leu Asn Lys Asn Lys 110 115 120

Leu Gln Val Leu Pro Glu Leu Leu Phe Gln Ser Thr Pro Lys Leu 125 130 135

Thr Arg Leu Asp Leu Ser Glu Asn Gln Ile Gln Gly Ile Pro Arg 140 145 150

Lys Ala Phe Arg Gly Ile Thr Asp Val Lys Asn Leu Gln Leu Asp 155 160 165

Asn Asn His Ile Ser Cys Ile Glu Asp Gly Ala Phe Arg Ala Leu 170 Arg Asp Leu Glu Ile Leu Thr Leu Asn Asn Asn Ile Ser Arg 190 185 Ile Leu Val Thr Ser Phe Asn His Met Pro Lys Ile Arg Thr Leu Arg Leu His Ser Asn His Leu Tyr Cys Asp Cys His Leu Ala Trp 215 Leu Ser Asp Trp Leu Arg Gln Arg Arg Thr Val Gly Gln Phe Thr 235 230 Leu Cys Met Ala Pro Val His Leu Arg Gly Phe Asn Val Ala Asp 250 245 Val Gln Lys Lys Glu Tyr Val Cys Pro Ala Pro His Ser Glu Pro 265 Pro Ser Cys Asn Ala Asn Ser Ile Ser Cys Pro Ser Pro Cys Thr Cys Ser Asn Asn Ile Val Asp Cys Arg Gly Lys Gly Leu Met Glu 290 295 Ile Pro Ala Asn Leu Pro Glu Gly Ile Val Glu Ile Arg Leu Glu 310 Gln Asn Ser Ile Lys Ala Ile Pro Ala Gly Ala Phe Thr Gln Tyr Lys Lys Leu Lys Arg Ile Asp Ile Ser Lys Asn Gln Ile Ser Asp 340 Ile Ala Pro Asp Ala Phe Gln Gly Leu Lys Ser Leu Thr Ser Leu 350 355 Val Leu Tyr Gly Asn Lys Ile Thr Glu Ile Ala Lys Gly Leu Phe 370 Asp Gly Leu Val Ser Leu Gln Leu Leu Leu Leu Asn Ala Asn Lys 385 Ile Asn Cys Leu Arg Val Asn Thr Phe Gln Asp Leu Gln Asn Leu 395 400 Asn Leu Leu Ser Leu Tyr Asp Asn Lys Leu Gln Thr Ile Ser Lys 415 Gly Leu Phe Ala Pro Leu Gln Ser Ile Gln Thr Leu His Leu Ala 430 Gln Asn Pro Phe Val Cys Asp Cys His Leu Lys Trp Leu Ala Asp Tyr Leu Gln Asp Asn Pro Ile Glu Thr Ser Gly Ala Arg Cys Ser

	455					460					465
Ser Pro Arg	Arg Leu 470	Ala	Asn	Lys	Arg	Ile 475	Ser	Gln	Ile	Lys	Ser 480
Lys Lys Phe	Arg Cys 485	Ser	Gly	Ser	Glu	Asp 490	Tyr	Arg	Ser	Arg	Phe 495
Ser Ser Glu	Cys Phe 500	Met	Asp	Leu	Val	Cys 505	Pro	Glu	Lys	Cys	Arg 510
Cys Glu Gly	Thr Ile 515	Val	Asp	Cys	Ser	Asn 520	Gln	Lys	Leu	Val	Arg 525
Ile Pro Ser	His Leu 530	Pro	Glu	Tyr	Val	Thr 535	Asp	Leu	Arg	Leu	Asn 540
Asp Asn Glu	Val Ser 545	Val	Leu	Glu	Ala	Thr 550	Gly	Ile	Phe	Lys	Lys 555
Leu Pro Asn	Leu Arg 560	Lys	Ile	Asn	Leu	Ser 565	Asn	Asn	Lys	Ile	Lys 570
Glu Val Arg	Glu Gly 575	Ala	Phe	Asp	Gly	Ala 580	Ala	Ser	Val	Gln	Glu 585
Leu Met Leu	Thr Gly 590	Asn	Gln	Leu	Glu	Thr 595	Val	His	Gly	Arg	Val 600
Phe Arg Gly	Leu Ser 605	Gly	Leu	Lys	Thr	Leu 610	Met	Leu	Arg	Ser	Asn 615
Leu Ile Ser	Cys Val 620	Ser	Asn	Asp	Thr	Phe 625	Ala	Gly	Leu	Ser	Ser 630
Val Arg Leu	Leu Ser 635	Leu	Tyr	Asp	Asn	Arg 640	Ile	Thr	Thr	Ile	Thr 645
Pro Gly Ala	Phe Thr 650	Thr	Leu	Val	Ser	Leu 655	Ser	Thr	Ile	Asn	Leu 660
Leu Ser Asn	Pro Phe 665	Asn	Cys	Asn	Cys	His 670	Leu	Ala	Trp	Leu	Gly 675
Lys Trp Leu	Arg Lys 680	Arg	Arg	Ile	Val	Ser 685	Gly	Asn	Pro	Arg	Cys 690
Gln Lys Pro	Phe Phe 695	Leu	Lys	Glu	Ile	Pro 700	Ile	Gln	Asp	Val	Ala 705
Ile Gln Asp	Phe Thr 710	Cys	Asp	Gly	Asn	Glu 715	Glu	Ser	Ser	Cys	Gln 720
Leu Ser Pro	Arg Cys 725	Pro	Glu	Gln	Cys	Thr 730	Cys	Met	Glu	Thr	Val 735
Val Arg Cys	Ser Asn 740	Lys	Gly	Leu	Arg	Ala 745	Leu	Pro	Arg	Gly	Met 750

Pro Lys Asp Val Thr Glu Leu Tyr Leu Glu Gly Asn His Leu Thr Ala Val Pro Arg Glu Leu Ser Ala Leu Arg His Leu Thr Leu Ile 775 Asp Leu Ser Asn Asn Ser Ile Ser Met Leu Thr Asn Tyr Thr Phe Ser Asn Met Ser His Leu Ser Thr Leu Ile Leu Ser Tyr Asn Arg 805 800 Leu Arg Cys Ile Pro Val His Ala Phe Asn Gly Leu Arg Ser Leu 820 Arg Val Leu Thr Leu His Gly Asn Asp Ile Ser Ser Val Pro Glu 835 Gly Ser Phe Asn Asp Leu Thr Ser Leu Ser His Leu Ala Leu Gly 850 Thr Asn Pro Leu His Cys Asp Cys Ser Leu Arg Trp Leu Ser Glu Trp Val Lys Ala Gly Tyr Lys Glu Pro Gly Ile Ala Arg Cys Ser Ser Pro Glu Pro Met Ala Asp Arg Leu Leu Leu Thr Thr Pro Thr His Arg Phe Gln Cys Lys Gly Pro Val Asp Ile Asn Ile Val Ala Lys Cys Asn Ala Cys Leu Ser Ser Pro Cys Lys Asn Asn Gly Thr Cys Thr Gln Asp Pro Val Glu Leu Tyr Arg Cys Ala Cys Pro Tyr 935 Ser Tyr Lys Gly Lys Asp Cys Thr Val Pro Ile Asn Thr Cys Ile Gln Asn Pro Cys Gln His Gly Gly Thr Cys His Leu Ser Asp Ser 975 965 His Lys Asp Gly Phe Ser Cys Ser Cys Pro Leu Gly Phe Glu Gly 980 Gln Arg Cys Glu Ile Asn Pro Asp Asp Cys Glu Asp Asn Asp Cys 995 1005 Glu Asn Asn Ala Thr Cys Val Asp Gly Ile Asn Asn Tyr Val Cys 1010 Ile Cys Pro Pro Asn Tyr Thr Gly Glu Leu Cys Asp Glu Val Ile 1035 1025 Asp His Cys Val Pro Glu Leu Asn Leu Cys Gln His Glu Ala Lys

			1040				1045				1050
Cys	Ile	Pro	Leu Asp 1055	Lys	Gly	Phe	Ser Cys 1060	Glu	Суз	Val	Pro Gly 1065
Tyr	Ser	Gly	Lys Leu 1070	Cys	Glu	Thr	Asp Asn 1075	Asp	Asp	Суз	Val Ala 1080
His	Lys	Cys	Arg His 1085	Gly	Ala	Gln	Cys Val 1090	Asp	Thr	Ile	Asn Gly 1095
Tyr	Thr	Cys	Thr Cys 1100	Pro	Gln	Gly	Phe Ser 1105	Gly	Pro	Phe	Cys Glu 1110
His	Pro	Pro	Pro Met 1115	Val	Leu	Leu	Gln Thr 1120	Ser	Pro	Cys	Asp Gln 1125
Tyr	Glu	Cys	Gln Asn 1130	Gly	Ala	Gln	Cys Ile 1135	Val	Val	Gln	Gln Glu 1140
Pro	Thr	Cys	Arg Cys 1145	Pro	Pro	Gly	Phe Ala 1150	Gly	Pro	Arg	Cys Glu 1155
Lys	Leu	Ile	Thr Val 1160	Asn	Phe	Val	Gly Lys 1165	Asp	Ser	Tyr	Val Glu 1170
Leu	Ala	Ser	Ala Lys 1175	Val	Arg	Pro	Gln Ala 1180	Asn	Ile	Ser	Leu Gln 1185
Val	Ala	Thr	Asp Lys 1190	Asp	Asn	Gly	Ile Leu 1195	Leu	Tyr	Lys	Gly Asp 1200
Asn	Asp	Pro	Leu Ala 1205	Leu	Glu	Leu	Tyr Gln 1210	Gly	His	Val	Arg Leu 1215
Val	Tyr	Asp	Ser Leu 1220	Ser	Ser	Pro	Pro Thr 1225	Thr	Val	Tyr	Ser Val 1230
Glu	Thr	Val	Asn Asp 1235	Gly	Gln	Phe	His Ser 1240	Val	Glu	Leu	Val Thr 1245
Leu	Asn	Gln	Thr Leu 1250	Asn	Leu	Val	Val Asp 1255	Lys	Gly	Thr	Pro Lys 1260
Ser	Leu	Gly	Lys Leu 1265	Gln	Lys	Gln	Pro Ala 1270	Val	Gly	Ile	Asn Ser 1275
Pro	Leu	Tyr	Leu Gly 1280	Gly	Ile	Pro	Thr Ser 1285	Thr	Gly	Leu	Ser Ala 1290
Leu	Arg	Gln	Gly Thr 1295	Asp	Arg	Pro	Leu Gly 1300	Gly	Phe	His	Gly Cys 1305
Ile	His	Glu	Val Arg 1310	Ile	Asn	Asn	Glu Leu 1315	Gln	Asp	Phe	Lys Ala 1320
Leu	Pro	Pro	Gln Ser 1325	Leu	Gly	Val	Ser Pro 1330	Gly	Cys	Lys	Ser Cys 1335

<220>

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Thr Val Cys Lys His Gly Leu Cys Arg Ser Val Glu Lys Asp Ser
· Val Val Cys Glu Cys Arg Pro Gly Trp Thr Gly Pro Leu Cys Asp
 Gln Glu Ala Arg Asp Pro Cys Leu Gly His Arg Cys His His Gly
                                     1375
 Lys Cys Val Ala Thr Gly Thr Ser Tyr Met Cys Lys Cys Ala Glu
                1385
 Gly Tyr Gly Gly Asp Leu Cys Asp Asn Lys Asn Asp Ser Ala Asn
                1400
                                     1405
 Ala Cys Ser Ala Phe Lys Cys His His Gly Gln Cys His Ile Ser
                                     1420
                1415
 Asp Gln Gly Glu Pro Tyr Cys Leu Cys Gln Pro Gly Phe Ser Gly
                                     1435
                1430
 Glu His Cys Gln Gln Glu Asn Pro Cys Leu Gly Gln Val Val Arg
                                     1450
 Glu Val Ile Arg Arg Gln Lys Gly Tyr Ala Ser Cys Ala Thr Ala
                                                         1470
                                     1465
 Ser Lys Val Pro Ile Met Glu Cys Arg Gly Gly Cys Gly Pro Gln
                                     1480
                 1475
 Cys Cys Gln Pro Thr Arg Ser Lys Arg Arg Lys Tyr Val Phe Gln
                 1490
                                     1495
 Cys Thr Asp Gly Ser Ser Phe Val Glu Glu Val Glu Arg His Leu
                                     1510
 Glu Cys Gly Cys Leu Ala Cys Ser
<210> 199
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 199
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<210> 200
<211> 24
 <212> DNA
 <213> Artificial
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great and the second of the second

gtc 753

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<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
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<210> 201
<211> 50
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-50
<223> Synthetic construct.
<400> 201
 gagggcatcg tcgaaatacg cctagaacag aactccatca aagccatccc 50
<210> 202
<211> 753
<212> DNA
<213> Homo sapiens
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 ggatgcagga cgctcccctg agctgcctgt caccgactag gtggagcagt 50
 gtttcttccg cagactcaac tgagaagtca gcctctgggg caggcaccag 100
 gaatctgcct tttcagttct gtctccggca ggctttgagg atgaaggctg 150
 cgggcattct gaccctcatt ggctgcctgg tcacaggcgc cgagtccaaa 200
 atctacactc gttgcaaact ggcaaaaata ttctcgaggg ctggcctgga 250
 caattactgg ggcttcagcc ttggaaactg gatctgcatg gcatattatg 300
 agageggeta caacaccaca geeeegaegg teetggatga eggeageate 350
 gactatggca tcttccagat caacagcttc gcgtggtgca gacgcggaaa 400
 gctgaaggag aacaaccact gccatgtcgc ctgctcagcc ttgatcactg 450
 atgacctcac agatgcaatt atctgtgcca ggaaaattgt taaagagaca 500
 caaggaatga actattggca aggctggaag aaacattgtg agggcagaga 550
 cctgtccgag tggaaaaaag gctgtgaggt ttcctaaact ggaactggac 600
 ccaggatgct ttgcagcaac gccctaggat ttgcagtgaa tgtccaaatg 650
 cctgtgtcat cttgtcccgt ttcctcccaa tattccttct caaacttgga 700
 gagggaaaat taagctatac ttttaagaaa ataaatattt ccatttaaat 750
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<210> 203
<211> 148
<212> PRT
<213> Homo sapiens
<400> 203
Met Lys Ala Ala Gly Ile Leu Thr Leu Ile Gly Cys Leu Val Thr
 Gly Ala Glu Ser Lys Ile Tyr Thr Arg Cys Lys Leu Ala Lys Ile
 Phe Ser Arg Ala Gly Leu Asp Asn Tyr Trp Gly Phe Ser Leu Gly
Asn Trp Ile Cys Met Ala Tyr Tyr Glu Ser Gly Tyr Asn Thr Thr
Ala Pro Thr Val Leu Asp Asp Gly Ser Ile Asp Tyr Gly Ile Phe
 Gln Ile Asn Ser Phe Ala Trp Cys Arg Arg Gly Lys Leu Lys Glu
Asn Asn His Cys His Val Ala Cys Ser Ala Leu Ile Thr Asp Asp
                                                          105
Leu Thr Asp Ala Ile Ile Cys Ala Arg Lys Ile Val Lys Glu Thr
                 110
 Gln Gly Met Asn Tyr Trp Gln Gly Trp Lys Lys His Cys Glu Gly
                                                          135
Arg Asp Leu Ser Glu Trp Lys Lys Gly Cys Glu Val Ser
<210> 204
<211> 24
<212> DNA
<213> Artificial
<220>
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<222> 1-24
<223> Synthetic construct.
<400> 204
gcaggctttg aggatgaagg ctgc 24
<210> 205
<211> 24
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<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
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<400> 205
 ctcattggct gcctggtcac aggc 24
<210> 206
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 206
 ccagtcggac aggtctctcc cctc 24
<210> 207
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 207
tcagtgacca aggctgagca ggcg 24
<210> 208
<211> 47
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-47
<223> Synthetic construct.
<400> 208
ctacactcgt tgcaaactgg caaaaatatt ctcgagggct ggcctgg 47
<210> 209
<211> 1648
<212> DNA
<213> Homo sapiens
<400> 209
 caggicatti gcatcccact gtccttgtgt tcggagccag gccacaccgt 50
 cctcagcagt gtcatgtgtt aaaaacgcca agctgaatat atcatgcccc 100
 tattaaaact tgtacatggc tccccattgg tttttggaga aaagttcaag 150
 ctttttacct tggtgtctgc ctgtatccca gtgttcaggc tggctagacg 200
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17 (80)

gcggaagaag atcctatttt actgtcactt cccagatctg cttctcacca 250

agagagattc ttttcttaaa cgactataca gggccccaat tgactggata 300 gaggaataca ccacaggcat ggcagactgc atcttagtca acagccagtt 350 cacagetget gtttttaagg aaacattcaa gteeetgtet cacatagace 400 ctgatgtcct ctatccatct ctaaatgtca ccagctttga ctcagttgtt 450 cctgaaaagc tggatgacct agtccccaag gggaaaaaat tcctgctgct 500 ctccatcaac agatacgaaa ggaagaaaaa tctgactttg gcactggaag 550 ccctagtaca gctgcgtgga agattgacat cccaagattg ggagagggtt 600 catctgatcg tggcaggtgg ttatgacgag agagtcctgg agaatgtgga 650 acattatcag gaattgaaga aaatggtcca acagtccgac cttggccagt 700 atgtgacctt cttgaggtct ttctcagaca aacagaaaat ctccctcctc 750 cacaqctqca cqtqtqtqct ttacacacca agcaatqagc actttggcat 800 tgtccctctg gaagccatgt acatgcagtg cccagtcatt gctgttaatt 850 cgggtggacc cttggagtcc attgaccaca gtgtcacagg gtttctgtgt 900 gagcctgacc cggtgcactt ctcagaagca atagaaaagt tcatccgtga 950 accttcctta aaagccacca tgggcctggc tggaagagcc agagtgaagg 1000 aaaaattttc ccctgaagca tttacagaac agctctaccg atatgttacc 1050 aaactgctgg tataatcaga ttgtttttaa gatctccatt aatgtcattt 1100 ttatggattg tagacccagt tttgaaacca aaaaagaaac ctagaatcta 1150 atgcagaaga gatcttttaa aaaataaact tgagtcttga atgtgagcca 1200 ctttcctata taccacacct ccctgtccac ttttcagaaa aaccatgtct 1250 tttatgctat aatcattcca aattttgcca gtgttaagtt acaaatgtgg 1300 tgtcattcca tgttcagcag agtattttaa ttatattttc tcgggattat 1350 tgctcttctg tctataaatt ttgaatgata ctgtgcctta attggttttc 1400 atagtttaag tgtgtatcat tatcaaagtt gattaatttg gcttcatagt 1450 ataatqaqaq caqqqctatt qtaqttccca gattcaatcc accgaagtgt 1500 tcactgtcat ctgttaggga atttttgttt gtcctgtctt tgcctggatc 1550 catagogaga gtgctctgta ttttttttaa gataatttgt atttttgcac 1600 actgagatat aataaaaggt gtttatcata aaaaaaaaa aaaaaaaa 1648

<210> 210

<211> 323

<212> PRT <213> Homo sapiens

<400> 210 Met Pro Leu Lys Leu Val His Gly Ser Pro Leu Val Phe Gly Glu Lys Phe Lys Leu Phe Thr Leu Val Ser Ala Cys Ile Pro Val Phe Arg Leu Ala Arg Arg Lys Lys Ile Leu Phe Tyr Cys His Phe Pro Asp Leu Leu Thr Lys Arg Asp Ser Phe Leu Lys Arg Leu Tyr Arg Ala Pro Ile Asp Trp Ile Glu Glu Tyr Thr Thr Gly Met Ala Asp Cys Ile Leu Val Asn Ser Gln Phe Thr Ala Ala Val 85 Phe Lys Glu Thr Phe Lys Ser Leu Ser His Ile Asp Pro Asp Val Leu Tyr Pro Ser Leu Asn Val Thr Ser Phe Asp Ser Val Val Pro 110 Glu Lys Leu Asp Asp Leu Val Pro Lys Gly Lys Lys Phe Leu Leu 135 125 Leu Ser Ile Asn Arg Tyr Glu Arg Lys Lys Asn Leu Thr Leu Ala Leu Glu Ala Leu Val Gln Leu Arg Gly Arg Leu Thr Ser Gln Asp 155 Trp Glu Arg Val His Leu Ile Val Ala Gly Gly Tyr Asp Glu Arg 170 Val Leu Glu Asn Val Glu His Tyr Gln Glu Leu Lys Lys Met Val 195 185 Gln Gln Ser Asp Leu Gly Gln Tyr Val Thr Phe Leu Arg Ser Phe Ser Asp Lys Gln Lys Ile Ser Leu Leu His Ser Cys Thr Cys Val 215 225 Leu Tyr Thr Pro Ser Asn Glu His Phe Gly Ile Val Pro Leu Glu 230 Ala Met Tyr Met Gln Cys Pro Val Ile Ala Val Asn Ser Gly Gly 255 245 Pro Leu Glu Ser Ile Asp His Ser Val Thr Gly Phe Leu Cys Glu 260

17 MAI 15

Pro Asp Pro Val His Phe Ser Glu Ala Ile Glu Lys Phe Ile Arg 275 280 285

Glu Pro Ser Leu Lys Ala Thr Met Gly Leu Ala Gly Arg Ala Arg 290 295 300

Val Lys Glu Lys Phe Ser Pro Glu Ala Phe Thr Glu Gln Leu Tyr 305 310 315

Arg Tyr Val Thr Lys Leu Leu Val 320

<210> 211

<211> 1554

<212> DNA

<213> Homo sapiens

<400> 211

gactacgccg atccgagacg tggctccctg ggcggcagaa ccatgttgga 50 cttcgcgatc ttcgccgtta ccttcttgct ggcgttggtg ggagccgtgc 100 tctacctcta tccggcttcc agacaagctg caggaattcc agggattact 150 ccaactgaag aaaaagatgg taatcttcca gatattgtga atagtggaag 200 tttgcatgag ttcctggtta atttgcatga gagatatggg cctgtggtct 250 ccttctggtt tggcaggcgc ctcgtggtta gtttgggcac tgttgatgta 300 ctgaagcagc atatcaatcc caataagaca tcggaccctt ttgaaaccat 350 gctgaagtca ttattaaggt atcaatctgg tggtggcagt gtgagtgaaa 400 accacatgag gaaaaaattg tatgaaaatg gtgtgactga ttctctgaag 450 agtaactttg ccctcctct aaagctttca gaagaattat tagataaatg 500 getetectae ceagagaece ageaegtgee ceteageeag catatgettg 550 gttttgctat gaagtctgtt acacagatgg taatgggtag tacatttgaa 600 gatgatcagg aagtcattcg cttccagaag aatcatggca cagtttggtc 650 tgagattgga aaaggctttc tagatgggtc acttgataaa aacatgactc 700 ggaaaaaaca atatgaagat gccctcatgc aactggagtc tgttttaagg 750 aacatcataa aagaacgaaa aggaaggaac ttcagtcaac atattttcat 800 tgactcctta gtacaaggga accttaatga ccaacagatc ctagaagaca 850 gtatgatatt ttctctggcc agttgcataa taactgcaaa attgtgtacc 900 tgggcaatct gttttttaac cacctctgaa gaagttcaaa aaaaattata 950 tqaaqaqata aaccaagttt ttggaaatgg tcctgttact ccagagaaaa 1000 ttgagcagct cagatattgt cagcatgtgc tttgtgaaac tgttcgaact 1050 gccaaactga ctccagtttc tgcccagctt caagatattg aaggaaaaat 1100 tgaccgattt attattccta gagagaccct cgtcctttat gcccttggtg 1150 tggtacttca ggatcctaat acttggccat ctccacacaa gtttgatcca 1200 gatcggtttg atgatgaatt agtaatgaaa actttttcct cacttggatt 1250 ctcaggcaca caggagtgtc cagagttgag gtttgcatat atggtgacca 1300 cagtacttct tagtgtattg gtgaagagac tgcacctact ttctgtggag 1350 ggacaggtta ttgaaacaaa gtatgaactg gtaacatcat caagggaaga 1400 agcttggatc actgtctcaa agagatatta aaattttata catttaaaat 1450 cattgttaaa ttgattgagg aaaacaacca tttaaaaaaa atctatgttg 1500 aatcctttta taaaccagta tcactttgta atataaacac ctatttgtac 1550 ttaa 1554

<210> 212

<211> 462

<212> PRT

<213> Homo sapiens

<400> 212

Met Leu Asp Phe Ala Ile Phe Ala Val Thr Phe Leu Leu Ala Leu 1 10 15

Val Gly Ala Val Leu Tyr Leu Tyr Pro Ala Ser Arg Gln Ala Ala 20 25 30

Gly Ile Pro Gly Ile Thr Pro Thr Glu Glu Lys Asp Gly Asn Leu 35 40 45

Pro Asp Ile Val Asn Ser Gly Ser Leu His Glu Phe Leu Val Asn 50 55 60

Leu His Glu Arg Tyr Gly Pro Val Val Ser Phe Trp Phe Gly Arg
65 70 75

Arg Leu Val Val Ser Leu Gly Thr Val Asp Val Leu Lys Gln His 80 85 90

Ile Asn Pro Asn Lys Thr Ser Asp Pro Phe Glu Thr Met Leu Lys 95 100 105

Ser Leu Leu Arg Tyr Gln Ser Gly Gly Gly Ser Val Ser Glu Asn 110 115 120

His Met Arg Lys Lys Leu Tyr Glu Asn Gly Val Thr Asp Ser Leu 125 130 135

Lys Ser Asn Phe Ala Leu Leu Leu Lys Leu Ser Glu Glu Leu Leu

				140					145					150
Asp	Lys	Trp	Leu	Ser 155	Tyr	Pro	Glu	Thr	Gln 160	His	Val	Pro	Leu	Ser 165
Gln	His	Met	Leu	Gly 170	Phe	Ala	Met	Lys	Ser 175	Val	Thr	Gln	Met	Val 180
Met	Gly	Ser	Thr	Phe 185	Glu	Asp	Asp	Gln	Glu 190	Val	Ile	Arg	Phe	Gln 195
Lys	Asn	His	Gly	Thr 200	Val	Trp	Ser	Glu	Ile 205	Gly	Lys	Gly	Phe	Leu 210
Asp	Gly	Ser	Leu	Asp 215	Lys	Asn	Met	Thr	Arg 220	Lys	Lys	Gln	Tyr	Glu 225
qsA	Ala	Leu	Met	Gln 230	Leu	Glu	Ser	Val	Leu 235	Arg	Asn	Ile	Ile	Lys 240
Glu	Arg	Lys	Gly	Arg 245	Asn	Phe	Ser	Gln	His 250	Ile	Phe	Ile	Asp	Ser 255
Leu	Val	Gln	Gly	Asn 260	Leu	Asn	Asp	Gln	Gln 265	Ile	Leu	Glu	Asp	Ser 270
Met	Ile	Phe	Ser	Leu 275	Ala	Ser	Cys	Ile	Ile 280	Thr	Ala	Lys	Leu	Cys 285
Thr	Trp	Ala	Ile	Cys 290	Phe	Leu	Thr	Thr	Ser 295	Glu	Glu	Val	Gln	Lys 300
Lys	Leu	Tyr	Glu	Glu 305	Ile	Asn	Gln	Val	Phe 310	Gly	Asn	Gly	Pro	Val 315
Thr	Pro	Glu	Lys	Ile 320	Glu	Gln	Leu	Arg	Tyr 325	Cys	Gln	His	Val	Leu 330
Cys	Glu	Thr	Val	Arg 335	Thr	Ala	Lys	Leu	Thr 340	Pro	Val	Ser	Ala	Gln 345
Leu	Gln	Asp	Ile	Glu 350	Gly	Lys	Ile	Asp	Arg 355	Phe	Ile	Ile	Pro	Arg 360
Glu	Thr	Leu	Val	Leu 365	Tyr	Ala	Leu	Gly	Val 370	Val	Leu	Gln	Asp	Pro 375
Asn	Thr	Trp	Pro	Ser 380	Pro	His	Lys	Phe	Asp 385	Pro	Asp	Arg	Phe	Asp 390
Asp	Glu	Leu	Val	Met 395	Lys	Thr	Phe	Ser	Ser 400	Leu	Gly	Phe	Ser	Gly 405
Thr	Gln	Glu	Cys	Pro 410	Glu	Leu	Arg	Phe	Ala 415	Tyr	Met	Val	Thr	Thr 420
Val	Leu	Leu	Ser	Val 425	Leu	Val	Lys	Arg	Leu 430	His	Leu	Leu	Ser	Val 435

Glu Gly Gln Val Ile Glu Thr Lys Tyr Glu Leu Val Thr Ser Ser 440 445 450

<210> 213

<211> 759

<212> DNA

<213> Homo sapiens

<400> 213

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<210> 214

<211> 140

<212> PRT

<213> Homo sapiens

<400> 214

Met Gly Arg Val Ser Gly Leu Val Pro Ser Arg Phe Leu Thr Leu
1 5 10 15

Leu Ala His Leu Val Val Val Ile Thr Leu Phe Trp Ser Arg Asp 20 25 30

Ser Asn Ile Gln Ala Cys Leu Pro Leu Thr Phe Thr Pro Glu Glu 35 40 45

111

2000

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Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala Ala Leu Ser Val Thr 50

Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe Leu Ser Gly Val 75

Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile Gly Ala His
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Cys Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu Arg Trp

Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala Leu 110 115 120

Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu 125 130 135

Lys Lys Lys Pro Phe 140

<210> 215

<211> 697

<212> DNA

<213> Homo sapiens

<400> 215

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<210> 216

<211> 196

<212> PRT

<213> Homo sapiens

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<400> 216
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 Ser Pro Ile Val Pro Arg Asn Glu Trp Lys Ala Leu Ala Ser Glu
Cys Ala Gln His Leu Ser Leu Pro Leu Arg Tyr Val Val Val Ser
 His Thr Ala Gly Ser Ser Cys Asn Thr Pro Ala Ser Cys Gln Gln
 Gln Ala Arg Asn Val Gln His Tyr His Met Lys Thr Leu Gly Trp
 Cys Asp Val Gly Tyr Asn Phe Leu Ile Gly Glu Asp Gly Leu Val
                                     100
 Tyr Glu Gly Arg Gly Trp Asn Phe Thr Gly Ala His Ser Gly His
                                     115
 Leu Trp Asn Pro Met Ser Ile Gly Ile Ser Phe Met Gly Asn Tyr
                                     130
                 125
 Met Asp Arg Val Pro Thr Pro Gln Ala Ile Arg Ala Ala Gln Gly
                                     145
                 140
 Leu Leu Ala Cys Gly Val Ala Gln Gly Ala Leu Arg Ser Asn Tyr
                                     160
 Val Leu Lys Gly His Arg Asp Val Gln Arg Thr Leu Ser Pro Gly
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 Asn Gln Leu Tyr His Leu Ile Gln Asn Trp Pro His Tyr Arg Ser
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Pro

<210> 217

<211> 1871 <212> DNA

<213> Homo sapiens

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3.00

geggggeeae ateteaceta agtecegeee catggeeaat tecaetetee 250 tagggctgct ggccccgcct ggggaggctt ggggcattct tgggcagccc 300 cccaaccgcc cgaaccacag cccccaccc tcagccaagg tgaagaaaat 350 ctttggctgg ggcgacttct actccaacat caagacggtg gccctgaacc 400 tgctcgtcac agggaagatt gtggaccatg gcaatgggac cttcagcgtc 450 cacttccaac acaatgccac aggccaggga aacatctcca tcagcctcgt 500 gcccccagt aaagctgtag agttccacca ggaacagcag atcttcatcg 550 aagccaaggc ctccaaaatc ttcaactgcc ggatggagtg ggagaaggta 600 gaacggggcc gccggacctc gctttgcacc cacgacccag ccaagatctg 650 ctcccgagac cacgetcaga getcagecae etggagetge teccagecet 700 tcaaagtcgt ctgtgtctac atcgccttct acagcacgga ctatcggctg 750 gtccagaagg tgtgcccaga ttacaactac catagtgata ccccctacta 800 ggacaggcct gcccatgcag gagaccatct ggacaccggg cagggaaggg 900 gttgggcctc aggcagggag gggggtggag acgaggagat gccaagtggg 950 gccagggcca agtctcaagt ggcagagaaa gggtcccaag tgctggtccc 1000 aacctgaagc tgtggagtga ctagatcaca ggagcactgg aggaggagtg 1050 ggctctctgt gcagcctcac agggctttgc cacggagcca cagagagatg 1100 ctgggtcccc gaggcctgtg ggcaggccga tcagtgtggc cccagatcaa 1150 gtcatgggag gaagctaagc ccttggttct tgccatcctg aggaaagata 1200 gcaacaggga gggggagatt tcatcagtgt ggacagcctg tcaacttagg 1250 gccagaggag ctctccagcc ctgcctagtg ggcgccctga gccccttgtc 1350 gtgtgctgag catggcatga ggctgaagtg gcaaccctgg ggtctttgat 1400 gtcttgacag attgaccatc tgtctccagc caggccaccc ctttccaaaa 1450 ttccctcttc tgccagtact ccccctgtac cacccattgc tgatggcaca 1500 cccatcctta agctaagaca ggacgattgt ggtcctccca cactaaggcc 1550 acageceate egegtgetgt gtgteeetet teeaececaa eeeetgetgg 1600 ctcctctggg agcatccatg tcccggagag gggtccctca acagtcagcc 1650

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<210> 218

<211> 252

<212> PRT

<213> Homo sapiens

<400> 218

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Leu Tyr Leu Val Ile Cys Gly Gln Asp Asp Gly Pro Pro Gly Ser 20 25 30

Glu Asp Pro Glu Arg Asp Asp His Glu Gly Gln Pro Arg Pro Arg
35 40 45

Val Pro Arg Lys Arg Gly His Ile Ser Pro Lys Ser Arg Pro Met
50 55 60

Ala Asn Ser Thr Leu Leu Gly Leu Leu Ala Pro Pro Gly Glu Ala 65 70 75

Trp Gly Ile Leu Gly Gln Pro Pro Asn Arg Pro Asn His Ser Pro 80 85 90

Pro Pro Ser Ala Lys Val Lys Lys Ile Phe Gly Trp Gly Asp Phe 95 100 105

Tyr Ser Asn Ile Lys Thr Val Ala Leu Asn Leu Leu Val Thr Gly
110 115 120

Lys Ile Val Asp His Gly Asn Gly Thr Phe Ser Val His Phe Gln 125 $$ 130 $$ $$ 135

His Asn Ala Thr Gly Gln Gly Asn Ile Ser Ile Ser Leu Val Pro $140 \hspace{1cm} 145 \hspace{1cm} 150 \hspace{1cm}$

Pro Ser Lys Ala Val Glu Phe His Gln Glu Gln Gln Ile Phe Ile 155 160 165

Glu Ala Lys Ala Ser Lys Ile Phe Asn Cys Arg Met Glu Trp Glu 170 175 180

Lys Val Glu Arg Gly Arg Arg Thr Ser Leu Cys Thr His Asp Pro 185 190 195

Ala Lys Ile Cys Ser Arg Asp His Ala Gln Ser Ser Ala Thr Trp 200 205 210

FOR THE 1 1 1 1

Ser Cys Ser Gln Pro Phe Lys Val Val Cys Val Tyr Ile Ala Phe 215 220 225

Tyr Ser Thr Asp Tyr Arg Leu Val Gln Lys Val Cys Pro Asp Tyr 230 235 240

Asn Tyr His Ser Asp Thr Pro Tyr Tyr Pro Ser Gly 245 250

<210> 219

<211> 2065

<212> DNA

<213> Homo sapiens

<400> 219

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<210> 220

<211> 201

<212> PRT

<213> Homo sapiens

<400> 220

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Leu Val Leu Thr Leu Pro Gly Leu Pro Val Trp Ala Gln Asn Asp $20 \\ 25 \\ 30$

Thr Glu Pro Ile Val Leu Glu Gly Lys Cys Leu Val Val Cys Asp 35 40 45

Ser Asn Pro Ala Thr Asp Ser Lys Gly Ser Ser Ser Pro Leu
50 55 60

<211> 40

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Phe Thr Leu Glu Ser Val Phe Val Ala Pro Arg Lys Gly Ile Tyr
                 110
Ser Phe Ser Phe His Val Ile Lys Val Tyr Gln Ser Gln Thr Ile
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                 125
Gln Val Asn Leu Met Leu Asn Gly Lys Pro Val Ile Ser Ala Phe
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Ala Gly Asp Lys Asp Val Thr Arg Glu Ala Ala Thr Asn Gly Val
Leu Leu Tyr Leu Asp Lys Glu Asp Lys Val Tyr Leu Lys Leu Glu
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                                     175
Lys Gly Asn Leu Val Gly Gly Trp Gln Tyr Ser Thr Phe Ser Gly
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Phe Leu Val Phe Pro Leu
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<210> 221
<211> 20
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<221> Artificial Sequence
<222> 1-20
<223> Synthetic construct.
<400> 221
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<211> 24
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<222> 1-24
<223> Synthetic construct.
<400> 222
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<210> 223
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111 1111

19 **101 H**

<212> PRT

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<213> Artificial
<220>
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<222> 1-40
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<211> 902
<212> DNA
<213> Homo sapiens
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<210> 225
<211> 257
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208

1907

<213> Homo sapiens

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Ser Arg

<210> 226

<211> 3939 <212> DNA <213> Homo sapiens

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111

<210> 227

<211> 832

<212> PRT

<213> Homo sapiens

<400> 227

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Val Glu Ser His Leu Gly Val Leu Gly Pro Lys Asn Val Ser Gln
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Lys Asp Ala Glu Phe Glu Arg Thr Tyr Val Asp Glu Val Asn Ser Glu Leu Val Asn Ile Tyr Thr Phe Asn His Thr Val Thr Arg Asn Arg Thr Glu Gly Val Arg Val Ser Val Asn Val Leu Asn Lys Gln Lys Gly Ala Pro Leu Leu Phe Val Val Arg Gln Lys Glu Ala Val Val Ser Phe Gln Val Pro Leu Ile Leu Arg Gly Met Phe Gln Arg 100 Lys Tyr Leu Tyr Gln Lys Val Glu Arg Thr Leu Cys Gln Pro Pro 115 Thr Lys Asn Glu Ser Glu Ile Gln Phe Phe Tyr Val Asp Val Ser 130 125 Thr Leu Ser Pro Val Asn Thr Thr Tyr Gln Leu Arg Val Ser Arg Met Asp Asp Phe Val Leu Arg Thr Gly Glu Gln Phe Ser Phe Asn 155 Thr Thr Ala Ala Gln Pro Gln Tyr Phe Lys Tyr Glu Phe Pro Glu Gly Val Asp Ser Val Ile Val Lys Val Thr Ser Asn Lys Ala Phe 190 185 Pro Cys Ser Val Ile Ser Ile Gln Asp Val Leu Cys Pro Val Tyr 200 Asp Leu Asp Asn Asn Val Ala Phe Ile Gly Met Tyr Gln Thr Met 215 Thr Lys Lys Ala Ala Ile Thr Val Gln Arg Lys Asp Phe Pro Ser 230 Asn Ser Phe Tyr Val Val Val Val Lys Thr Glu Asp Gln Ala 245 250 Cys Gly Gly Ser Leu Pro Phe Tyr Pro Phe Ala Glu Asp Glu Pro 260 Val Asp Gln Gly His Arg Gln Lys Thr Leu Ser Val Leu Val Ser 285 275 Gln Ala Val Thr Ser Glu Ala Tyr Val Ser Gly Met Leu Phe Cys 295 Leu Gly Ile Phe Leu Ser Phe Tyr Leu Leu Thr Val Leu Leu Ala 315 305 Cys Trp Glu Asn Trp Arg Gln Lys Lys Lys Thr Leu Leu Val Ala

				320					325					330
Ile	Asp	Arg	Ala	Cys 335	Pro	Glu	Ser	Gly	His 340	Pro	Arg	Val	Leu	Ala 345
Asp	Ser	Phe	Pro	Gly 350	Ser	Ser	Pro	Tyr	Glu 355	Gly	Tyr	Asn	Tyr	Gly 360
Ser	Phe	Glu	Asn	Val 365	Ser	Gly	Ser	Thr	Asp 370	Gly	Leu	Val	Asp	Ser 375
Ala	Gly	Thr	Gly	Asp 380	Leu	Ser	Tyr	Gly	Tyr 385	Gln	Gly	Arg	Ser	Phe 390
Glu	Pro	Val	Gly	Thr 395	Arg	Pro	Arg	Val	Asp 400	Ser	Met	Ser	Ser	Val 405
Glu	Glu	Asp	Asp	Tyr 410	Asp	Thr	Leu	Thr	Asp 415	Ile	Asp	Ser	Asp	Lys 420
Asn	Val	Ile	Arg	Thr 425	Lys	Gln	Tyr	Leu	Tyr 430	Val	Ala	Asp	Leu	Ala 435
Arg	Lys	Asp	Lys	Arg 440	Val	Leu	Arg	Lys	Lys 445	Tyr	Gln	Ile	Tyr	Phe 450
Trp	Asn	Ile	Ala	Thr 455	Ile	Ala	Val	Phe	Tyr 460	Ala	Leu	Pro	Val	Val 465
Gln	Leu	Val	Ile	Thr 470	Tyr	Gln	Thr	Val	Val 475	Asn	Val	Thr	Gly	Asn 480
Gln	Asp	Ile	Cys	Tyr 485	Tyr	Asn	Phe	Leu	Cys 490	Ala	His	Pro	Leu	Gly 495
Asn	Leu	Ser	Ala	Phe 500	Asn	Asn	Ile	Leu	Ser 505	Asn	Leu	Gly	Tyr	Ile 510
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Asn	His	Asn	Arg	Ala 530	Leu	Leu	Arg	Asn	Asp 535	Leu	Cys	Ala	Leu	Glu 540
Cys	Gly	Ile	Pro	Lys 545	His	Phe	Gly	Leu	Phe 550	Tyr	Ala	Met	Gly	Thr 555
Ala	Leu	Met	Met	Glu 560	Gly	Leu	Leu	Ser	Ala 565	Cys	Tyr	His	Val	Cys 570
Pro	Asn	Tyr	Thr	Asn 575	Phe	Gln	Phe	Asp	Thr 580		Phe	Met	Tyr	Met 585
Ile	Ala	Gly	Leu	Cys 590		Leu	Lys	Leu	Tyr 595	Gln	Lys	Arg	His	Pro 600
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Asp Ser Gly Ile Phe Arg Arg Ile Leu His Val Leu Tyr Thr Asp
Cys Ile Arg Gln Cys Ser Gly Pro Leu Tyr Val Asp Arg Met Val
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<212> DNA

<213> Homo sapiens

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<211> 807

<212> PRT

<213> Homo sapiens

<400> 229

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Ser	Gly	Lys	Ala	Thr 65	Glu	Gly	Pro	Phe	Ala 70	Met	Asp	Pro	Asp	Ser 75
Gly	Phe	Leu	Leu	Val 80	Thr	Arg	Ala	Leu	Asp 85	Arg	Glu	Glu	Gln	Ala 90
Glu	Tyr	Gln	Leu	Gln 95	Val	Thr	Leu	Glu	Met 100	Gln	Asp	Gly	His	Val 105
Leu	Trp	Gly	Pro	Gln 110	Pro	Val	Leu	Val	His 115	Val	Lys	Asp	Glu	Asn 120
Asp	Gln	Val	Pro	His 125	Phe	Ser	Gln	Ala	Ile 130	Tyr	Arg	Ala	Arg	Leu 135
Ser	Arg	Gly	Thr	Arg 140	Pro	Gly	Ile	Pro	Phe 145	Leu	Phe	Leu	Glu	Ala 150
Ser	Asp	Arg	Asp	Glu 155	Pro	Gly	Thr	Ala	Asn 160	Ser	Asp	Leu	Arg	Phe 165
His	Ile	Leu	Ser	Gln 170	Ala	Pro	Ala	Gln	Pro 175	Ser	Pro	Asp	Met	Phe 180
Gln	Leu	Glu	Pro	Arg 185	Leu	Gly	Ala	Leu	Ala 190	Leu	Ser	Pro	Lys	Gly 195
Ser	Thr	Ser	Leu	Asp 200	His	Ala	Leu	Glu	Arg 205	Thr	Tyr	Gln	Leu	Leu 210
Val	Gln	Val	Lys	Asp 215	Met	Gly	Asp	Gln	Ala 220	Ser	Gly	His	Gln	Ala 225
Thr	Ala	Thr	Val	Glu 230	Val	Ser	Ile	Ile	Glu 235	Ser	Thr	Trp	Val	Ser 240
Leu	Glu	Pro	Ile	His 245	Leu	Ala	Glu	Asn	Leu 250	Lys	Val	Leu	Tyr	Pro 255
His	His	Met	Ala	Gln 260	Val	His	Trp	Ser	Gly 265	Gly	Asp	Val	His	Tyr 270
His	Leu	Glu	Ser	His 275	Pro	Pro	Gly	Pro	Phe 280	Glu	Val	Asn	Ala	Glu 285
Gly	Asn	Leu	Tyr	Val 290		Arg	Glu	Leu	Asp 295		Glu	Ala	Gln	Ala 300
Glu	Tyr	Leu	Leu	Gln 305		Arg	Ala	Gln	Asn 310	Ser	His	Gly	Glu	Asp 315

Tyr Ala Ala Pro Leu Glu Leu His Val Leu Val Met Asp Glu Asn 320 Asp Asn Val Pro Ile Cys Pro Pro Arg Asp Pro Thr Val Ser Ile 340 Pro Glu Leu Ser Pro Pro Gly Thr Glu Val Thr Arg Leu Ser Ala 355 Glu Asp Ala Asp Ala Pro Gly Ser Pro Asn Ser His Val Val Tyr 365 Gln Leu Leu Ser Pro Glu Pro Glu Asp Gly Val Glu Gly Arg Ala 385 380 Phe Gln Val Asp Pro Thr Ser Gly Ser Val Thr Leu Gly Val Leu 400 395 Pro Leu Arg Ala Gly Gln Asn Ile Leu Leu Leu Val Leu Ala Met 415 Asp Leu Ala Gly Ala Glu Gly Gly Phe Ser Ser Thr Cys Glu Val 430 Glu Val Ala Val Thr Asp Ile Asn Asp His Ala Pro Glu Phe Ile 445 440 Thr Ser Gln Ile Gly Pro Ile Ser Leu Pro Glu Asp Val Glu Pro 460 455 Gly Thr Leu Val Ala Met Leu Thr Ala Ile Asp Ala Asp Leu Glu 475 470 Pro Ala Phe Arg Leu Met Asp Phe Ala Ile Glu Arg Gly Asp Thr 490 Glu Gly Thr Phe Gly Leu Asp Trp Glu Pro Asp Ser Gly His Val Arg Leu Arg Leu Cys Lys Asn Leu Ser Tyr Glu Ala Ala Pro Ser 515 His Glu Val Val Val Val Gln Ser Val Ala Lys Leu Val Gly 535 530 Pro Gly Pro Gly Pro Gly Ala Thr Ala Thr Val Thr Val Leu Val 550 Glu Arg Val Met Pro Pro Pro Lys Leu Asp Gln Glu Ser Tyr Glu 560 Ala Ser Val Pro Ile Ser Ala Pro Ala Gly Ser Phe Leu Leu Thr 580 575 Ile Gln Pro Ser Asp Pro Ile Ser Arg Thr Leu Arg Phe Ser Leu 595 590 Val Asn Asp Ser Glu Gly Trp Leu Cys Ile Glu Lys Phe Ser Gly

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Thr	Tyr	Thr	Val	Leu 635	Val	Glu	Ala	Gln	Asp 640	Thr	Ala	Leu	Thr	Leu 645
Ala	Pro	Val	Pro	Ser 650	Gln	Tyr	Leu	Cys	Thr 655	Pro	Arg	Gln	Asp	His 660
Gly	Leu	Ile	Val	Ser 665	Gly	Pro	Ser	Lys	Asp 670	Pro	Asp	Leu	Ala	Ser 675
Gly	His	Gly	Pro	Tyr 680	Ser	Phe	Thr	Leu	Gly 685	Pro	Asn	Pro	Thr	Val 690
Gln	Arg	Asp	Trp	Arg 695	Leu	Gln	Thr	Leu	Asn 700	Gly	Ser	His	Ala	Ту: 705
Leu	Thr	Leu	Ala	Leu 710	His	Trp	Val	Glu	Pro 715	Arg	Glu	His	Ile	11e 720
Pro	Val	Val	Val	Ser 725	His	Asn	Ala	Gln	Met 730	Trp	Gln	Leu	Leu	Va] 735
Arg	Val	Ile	Val	Cys 740	Arg	Cys	Asn	Val	Glu 745	Gly	Gln	Cys	Met	Arg 750
Lys	Val	Gly	Arg	Met 755	Lys	Gly	Met	Pro	Thr 760	Lys	Leu	Ser	Ala	Val 765
Gly	Ile	Leu	Val	Gly 770	Thr	Leu	Val	Ala	Ile 775	Gly	Ile	Phe	Leu	11e 780
Leu	Ile	Phe	Thr	His 785	Trp	Thr	Met	Ser	Arg 790	Lys	Lys	Asp	Pro	Asr 795
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17 [8] 11

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<211> 421

<212> PRT

<213> Homo sapiens

<400> 234

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Val Arg Asn Gly Asp Glu Ile Ser Lys Leu Ser Gln Leu Val Asn 35 40 45

Ser Asn Asn Leu Lys Leu Asn Phe Trp Lys Ser Pro Ser Ser Phe 50 55 60

Asn Arg Pro Val Asp Val Leu Val Pro Ser Val Ser Leu Gln Ala 65 70 75

Phe Lys Ser Phe Leu Arg Ser Gln Gly Leu Glu Tyr Ala Val Thr 80 85 90

Ile Glu Asp Leu Gln Ala Leu Leu Asp Asn Glu Asp Asp Glu Met
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Gln His Asn Glu Gly Gln Glu Arg Ser Ser Asn Asn Phe Asn Tyr 110 115 120

Gly Ala Tyr His Ser Leu Glu Ala Ile Tyr His Glu Met Asp Asn 125 130 135

Ile Ala Ala Asp Phe Pro Asp Leu Ala Arg Arg Val Lys Ile Gly 140 145

His Ser Phe Glu Asn Arg Pro Met Tyr Val Leu Lys Phe Ser Thr 155 160 165

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Arg Lys Ile Val Ser Asp Tyr Gln Arg Asp Pro Ala Ile Thr Ser
Ile Leu Glu Lys Met Asp Ile Phe Leu Leu Pro Val Ala Asn Pro
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Asn Arg Asn Trp Asn Ala Ser Phe Ala Gly Lys Gly Ala Ser Asp
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Lys Phe Ala Phe Thr Phe Glu Leu Arg Asp Thr Gly Thr Tyr Gly
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<211> 1743

<212> DNA

<213> Homo sapiens

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Pro Arg Pro Ser Ser Thr Lys Ser Thr Pro Ala Ser Gln Val Tyr 35 40 45

Ser Leu Asn Thr Asp Phe Ala Phe Arg Leu Tyr Arg Arg Leu Val 50 55 60

Leu Glu Thr Pro Ser Gln Asn Ile Phe Phe Ser Pro Val Ser Val
65 70 75

Ser Thr Ser Leu Ala Met Leu Ser Leu Gly Ala His Ser Val Thr 80 85 90

Lys Thr Gln Ile Leu Gln Gly Leu Gly Phe Asn Leu Thr His Thr 95 100 105

Pro Glu Ser Ala Ile His Gln Gly Phe Gln His Leu Val His Ser 110 115 120

Leu Thr Val Pro Ser Lys Asp Leu Thr Leu Lys Met Gly Ser Ala 125 130

Leu Phe Val Lys Lys Glu Leu Gln Leu Gln Ala Asn Phe Leu Gly 140 145

Asn Val Lys Arg Leu Tyr Glu Ala Glu Val Phe Ser Thr Asp Phe 155 160 165

Ser Asn Pro Ser Ile Ala Gln Ala Arg Ile Asn Ser His Val Lys 170 175 180

Lys Lys Thr Gln Gly Lys Val Val Asp Ile Ile Gln Gly Leu Asp 185 190 195

Leu Leu Thr Ala Met Val Leu Val Asn His Ile Phe Phe Lys Ala

			200					205					210
Lys Tr	p Glu	Lys	Pro 215	Phe	His	Leu	Glu	Tyr 220	Thr	Arg	Lys	Asn	Phe 225
Pro Ph	ie Leu	Val	Gly 230	Glu	Gln	Val	Thr	Val 235	Gln	Val	Pro	Met	Met 240
His Gl	n Lys	Glu	Gln 245	Phe	Ala	Phe	Gly	Val 250	Asp	Thr	Glu	Leu	Asn 255
Cys Ph	ne Val	Leu	Gln 260	Met	Asp	Tyr	Lys	Gly 265	Asp	Ala	Val	Ala	Phe 270
Phe Va	al Leu	Pro	Ser 275	Lys	Gly	Lys	Met	Arg 280	Gln	Leu	Glu	Gln	Ala 285
Leu Se	er Ala	Arg	Thr 290	Leu	Ile	Lys	Trp	Ser 295	His	Ser	Leu	Gln	Lys 300
Arg Tr	p Ile	Glu	Val 305	Phe	Ile	Pro	Arg	Phe 310	Ser	Ile	Ser	Ala	Ser 315
Tyr As	sn Leu	Glu	Thr 320	Ile	Leu	Pro	Lys	Met 325	Gly	Ile	Gln	Asn	Ala 330
Phe As	sp Lys	Asn	Ala 335	Asp	Phe	Ser	Gly	Ile 340	Ala	Lys	Arg	Asp	Ser 345
Leu Gl	ln Val	Ser	Lys 350	Ala	Thr	His	Lys	Ala 355	Val	Leu	Asp	Val	Ser 360
Glu Gl	lu Gly	Thr	Glu 365	Ala	Thr	Ala	Ala	Thr 370	Thr	Thr	Lys	Phe	Ile 375
Val A	rg Ser	Lys	Asp 380	Gly	Pro	Ser	Tyr	Phe 385	Thr	Val	Ser	Phe	Asn 390
Arg Th	nr Phe	Leu	Met 395	Met	Ile	Thr	Asn	Lys 400	Ala	Thr	Asp	Gly	Ile 405
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<212> PRT

<213> Homo sapiens

<400> 243

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n Val Leu Leu Met Phe Gly Leu Leu 1 5 10 15

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Ala Asn Thr Gly Ser Ser Val Ile Ser Ser Gly Ala Ser Thr Ala 35 40 45

Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Val Ser Thr Ala
50 55 60

Thr Ile Ser Gly Ser Ser Val Thr Ser Asn Gly Val Ser Ile Val 65 70 75

Thr Asn Ser Glu Phe His Thr Thr Ser Ser Gly Ile Ser Thr Ala Thr Asn Ser Glu Phe Ser Thr Ala Ser Ser Gly Ile Ser Ile Ala 95 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 115 Thr Asn Ser Glu Ser Ser Thr Pro Ser Ser Gly Ala Ser Thr Val 125 Thr Asn Ser Gly Ser Ser Val Thr Ser Ser Gly Ala Ser Thr Ala 145 140 Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Arg Ala Ser Thr Ala 160 155 Thr Asn Ser Glu Ser Ser Thr Leu Ser Ser Gly Ala Ser Thr Ala 175 170 Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 185 190 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 200 205 Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Arg Ala Ser Thr Ala 220 215 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 230 235 Thr Asn Ser Glu Ser Arg Thr Thr Ser Asn Gly Ala Gly Thr Ala 250 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 260 265 Thr Asn Ser Asp Ser Ser Thr Val Ser Ser Gly Ala Ser Thr Ala 280 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 300 290 295 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Ser Thr Ala 310 Thr Asn Ser Asp Ser Ser Thr Thr Ser Ser Gly Ala Gly Thr Ala 330 320 Thr Asn Ser Glu Ser Ser Thr Val Ser Ser Gly Ile Ser Thr Val 335 Thr Asn Ser Glu Ser Ser Thr Pro Ser Ser Gly Ala Asn Thr Ala 360 350 Thr Asn Ser Glu Ser Ser Thr Thr Ser Ser Gly Ala Asn Thr Ala

No. of the part of

			365					370					375
Thr Asn	Ser	Glu	Ser 380	Ser	Thr	Val	Ser	Ser 385	Gly	Ala	Ser	Thr	Ala 390
Thr Asn	Ser	Glu	Ser 395	Ser	Thr	Thr	Ser	Ser 400	Gly	Val	Ser	Thr	Ala 405
Thr Asn	Ser	Glu	Ser 410	Ser	Thr	Thr	Ser	Ser 415	Gly	Ala	Ser	Thr	Ala 420
Thr Asn	Ser	Asp	Ser 425	Ser	Thr	Thr	Ser	Ser 430	Glu	Ala	Ser	Thr	Ala 435
Thr Asn	Ser	Glu	Ser 440	Ser	Thr	Val	Ser	Ser 445	Gly	Ile	Ser	Thr	Val 450
Thr Asn	Ser	Glu	Ser 455	Ser	Thr	Thr	Ser	Ser 460	Gly	Ala	Asn	Thr	Ala 465
Thr Asn	Ser	Gly	Ser 470	Ser	Val	Thr	Ser	Ala 475	Gly	Ser	Gly	Thr	Ala 480
Ala Leu	Thr	Gly	Met 485	His	Thr	Thr	Ser	His 490	Ser	Ala	Ser	Thr	Ala 495
Val Ser	Glu	Ala	Lys 500	Pro	Gly	Gly	Ser	Leu 505	Val	Pro	Trp	Glu	Ile 510
Phe Leu	Ile	Thr	Leu 515	Val	Ser	Val	Val	Ala 520	Ala	Val	Gly	Leu	Phe 525
Ala Gly	Leu	Phe	Phe 530	Cys	Val	Arg	Asn	Ser 535	Leu	Ser	Leu	Arg	Asn 540
Thr Phe	Asn	Thr	Ala 545	Val	Tyr	His	Pro	His 550	Gly	Leu	Asn	His	Gly 555
Leu Gly	Pro	Gly	Pro 560	Gly	Gly	Asn	His	Gly 565	Ala	Pro	His	Arg	Pro 570
Arg Trp	Ser	Pro	Asn 575	Trp	Phe	Trp	Arg	Arg 580	Pro	Val	Ser	Ser	Ile 585
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17 #1 8

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<211> 247

<212> PRT

<213> Homo sapiens

<400> 248

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Leu Gly Gln Gly Val Asn His Ala Ala Asp Gln Ala Gly Lys Glu

Val Glu Lys Leu Gly Gln Gly Ala His His Ala Ala Gly Gln Ala

155

170

165

180

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Gly Lys Glu Leu Gln Asn Ala His Asn Gly Val Asn Gln Ala Ser
                                     190
Lys Glu Ala Asn Gln Leu Leu Asn Gly Asn His Gln Ser Gly Ser
                 200
Ser Ser His Gln Gly Gly Ala Thr Thr Pro Leu Ala Ser Gly
                                     220
                 215
Ala Ser Val Asn Thr Pro Phe Ile Asn Leu Pro Ala Leu Trp Arg
                 230
                                     235
Ser Val Ala Asn Ile Met Pro
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Continuing to the continuing

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<211> 837

<212> PRT

<213> Homo sapiens

<400> 253

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Trp Gly Ala Leu Pro Pro Arg Pro Pro Leu Leu Leu Leu Leu 20 25 30

Leu Leu Leu Leu Gln Pro Pro Pro Pro Thr Trp Ala Leu Ser 35 40 45

Pro Arg Ile Ser Leu Pro Leu Gly Ser Glu Glu Arg Pro Phe Leu 50 55 60

Arg Phe Glu Ala Glu His Ile Ser Asn Tyr Thr Ala Leu Leu Leu 65 70 75

Ser Arg Asp Gly Arg Thr Leu Tyr Val Gly Ala Arg Glu Ala Leu

118 188

				80					85					90
Phe	Ala	Leu	Ser	Ser 95	Asn	Leu	Ser	Phe	Leu 100	Pro	Gly	Gly	Glu	Tyr 105
Gln	Glu	Leu	Leu	Trp 110	Gly	Ala	Asp	Ala	Glu 115	Lys	Lys	Gln	Gln	Cys 120
Ser	Phe	Lys	Gly	Lys 125	Asp	Pro	Gln	Arg	Asp 130	Cys	Gln	Asn	Tyr	Ile 135
Lys	Ile	Leu	Leu	Pro 140	Leu	Ser	Gly	Ser	His 145	Leu	Phe	Thr	Cys	Gly 150
Thr	Ala	Ala	Phe	Ser 155	Pro	Met	Cys	Thr	Tyr 160	Ile	Asn	Met	Glu	Asn 165
Phe	Thr	Leu	Ala	Arg 170	Asp	Glu	Lys	Gly	Asn 175	Val	Leu	Leu	Glu	Asp 180
Gly	Lys	Gly	Arg	Cys 185	Pro	Phe	Asp	Pro	Asn 190	Phe	Lys	Ser	Thr	Ala 195
Leu	Val	Val	Asp	Gly 200	Glu	Leu	Tyr	Thr	Gly 205	Thr	Val	Ser	Ser	Phe 210
Gln	Gly	Asn	Asp	Pro 215	Ala	Ile	Ser	Arg	Ser 220	Gln	Ser	Leu	Arg	Pro 225
Thr	Lys	Thr	Glu	Ser 230	Ser	Leu	Asn	Trp	Leu 235	Gln	Asp	Pro	Ala	Phe 240
Val	Ala	Ser	Ala	Tyr 245	Ile	Pro	Glu	Ser	Leu 250	Gly	Ser	Leu	Gln	Gly 255
Asp	Asp	Asp	Lys	Ile 260		Phe	Phe	Phe	Ser 265	Glu	Thr	Gly	Gln	Glu 270
Phe	Glu	Phe	Phe	Glu 275		Thr	Ile	Val	Ser 280	Arg	Ile	Ala	Arg	Ile 285
Cys	Lys	Gly	Asp	Glu 290		Gly	Glu	Arg	Val 295	Leu	Gln	Gln	Arg	Trp 300
Thr	Ser	Phe	Leu	Lys 305		Gln	Leu	Leu	Cys 310	Ser	Arg	Pro	Asp	Asp 315
Gly	Phe	Pro	Phe	Asn 320		. Leu	Gln	Asp	Val 325	Phe	Thr	Leu	Ser	Pro 330
Ser	Pro	Gln	Asp	Trp 335		Asp	Thr	Leu	Phe 340	Tyr	Gly	val	. Phe	Thr 345
Ser	Gln	Trp	His	Arg 350		Thr	Thr	Glu	Gly 355	Ser	Ala	. Val	. Cys	Val 360
Ph∈	Thr	: Met	Lys	Asp 365		Gln	Arg	Val	. Phe	ser	Gly	Leu	туг	Lys 375

Glu Val Asn Arg Glu Thr Gln Gln Trp Tyr Thr Val Thr His Pro Val Pro Thr Pro Arg Pro Gly Ala Cys Ile Thr Asn Ser Ala Arg Glu Arg Lys Ile Asn Ser Ser Leu Gln Leu Pro Asp Arg Val Leu 410 415 Asn Phe Leu Lys Asp His Phe Leu Met Asp Gly Gln Val Arg Ser Arg Met Leu Leu Gln Pro Gln Ala Arg Tyr Gln Arg Val Ala Val His Arg Val Pro Gly Leu His His Thr Tyr Asp Val Leu Phe Leu Gly Thr Gly Asp Gly Arg Leu His Lys Ala Val Ser Val Gly Pro Arg Val His Ile Ile Glu Glu Leu Gln Ile Phe Ser Ser Gly Gln Pro Val Gln Asn Leu Leu Leu Asp Thr His Arg Gly Leu Leu Tyr Ala Ala Ser His Ser Gly Val Val Gln Val Pro Met Ala Asn Cys Ser Leu Tyr Arg Ser Cys Gly Asp Cys Leu Leu Ala Arg Asp Pro Tyr Cys Ala Trp Ser Gly Ser Ser Cys Lys His Val Ser Leu Tyr Gln Pro Gln Leu Ala Thr Arg Pro Trp Ile Gln Asp Ile Glu Gly Ala Ser Ala Lys Asp Leu Cys Ser Ala Ser Ser Val Val Ser 580 Pro Ser Phe Val Pro Thr Gly Glu Lys Pro Cys Glu Gln Val Gln 595 Phe Gln Pro Asn Thr Val Asn Thr Leu Ala Cys Pro Leu Leu Ser 605 Asn Leu Ala Thr Arg Leu Trp Leu Arg Asn Gly Ala Pro Val Asn 620 Ala Ser Ala Ser Cys His Val Leu Pro Thr Gly Asp Leu Leu Leu 635 Val Gly Thr Gln Gln Leu Gly Glu Phe Gln Cys Trp Ser Leu Glu 650 655 Glu Gly Phe Gln Gln Leu Val Ala Ser Tyr Cys Pro Glu Val Val

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Gly Glu Cys	s Ala Ser 755		His	Pro	Lys	Thr 760	Cys	Pro	Val	Val	Leu 765	
Pro Pro Glu	Thr Arc		Leu	Asn	Gly	Leu 775	Gly	Pro	Pro	Ser	Thr 780	
Pro Leu Asp	His Aro		Tyr	Gln	Ser	Leu 790	Ser	Asp	Ser	Pro	Pro 795	
Gly Ala Arg	y Val Phe 800		Glu	Ser	Glu	Lys 805	Arg	Pro	Leu	Ser	Ile 810	
Gln Asp Se	r Phe Val		Val	Ser	Pro	Val 820	Cys	Pro	Arg	Pro	Arg 825	
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ar recorder to a tilbert record to the contract of

agggegggac gggagecegg actegtetge egeegeegte gtegeegteg 150

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Glu Gly Cys Arg Ser Gly Gln Ala Ala Ser Gln Ala Gly Gly
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Ala Arg Gly Asp Ala Arg Gly Ala Gln Leu Trp Pro Pro Gly Ser
65 70 75

Asp Pro Asp Gly Gly Pro Arg Asp Arg Asn Phe Leu Phe Val Gly 80 85 90

Val Met Thr Ala Gln Lys Tyr Leu Gln Thr Arg Ala Val Ala Ala 95 100 105

Tyr Arg Thr Trp Ser Lys Thr Ile Pro Gly Lys Val Gln Phe Phe 110 115 120

Ser Ser Glu Gly Ser Asp Thr Ser Val Pro Ile Pro Val Val Pro 125 $$ 130 $$ 135

Leu Arg Gly Val Asp Asp Ser Tyr Pro Pro Gln Lys Lys Ser Phe 140 145 150

Met Met Leu Lys Tyr Met His Asp His Tyr Leu Asp Lys Tyr Glu 155 160 165

Trp Phe Met Arg Ala Asp Asp Asp Val Tyr Ile Lys Gly Asp Arg 170 175 180

Leu Glu Asn Phe Leu Arg Ser Leu Asn Ser Ser Glu Pro Leu Phe 185 190 195

Leu Gly Gln Thr Gly Leu Gly Thr Thr Glu Glu Met Gly Lys Leu $200 \hspace{1.5cm} 205 \hspace{1.5cm} 210 \hspace{1.5cm}$

Ala Leu Glu Pro Gly Glu Asn Phe Cys Met Gly Gly Pro Gly Val 215 220 225

Ile Met Ser Arg Glu Val Leu Arg Arg Met Val Pro His Ile Gly 230 235 240

1 III III I

Lys Cys Leu Arg Glu Met Tyr Thr Thr His Glu Asp Val Glu Val Gly Arg Cys Val Arg Arg Phe Ala Gly Val Gln Cys Val Trp Ser 260 265 Tyr Glu Met Arg Gln Leu Phe Tyr Glu Asn Tyr Glu Gln Asn Lys Lys Gly Tyr Ile Arg Asp Leu His Asn Ser Lys Ile His Gln Ala Ile Thr Leu His Pro Asn Lys Asn Pro Pro Tyr Gln Tyr Arg Leu His Ser Tyr Met Leu Ser Arg Lys Ile Ser Glu Leu Arg His Arg Thr Ile Gln Leu His Arg Glu Ile Val Leu Met Ser Lys Tyr Ser Asn Thr Glu Ile His Lys Glu Asp Leu Gln Leu Gly Ile Pro Pro Ser Phe Met Arg Phe Gln Pro Arg Gln Arg Glu Glu Ile Leu Glu Trp Glu Phe Leu Thr Gly Lys Tyr Leu Tyr Ser Ala Val Asp Gly Gln Pro Pro Arg Arg Gly Met Asp Ser Ala Gln Arg Glu Ala Leu Asp Asp Ile Val Met Gln Val Met Glu Met Ile Asn Ala Asn Ala 410 Lys Thr Arg Gly Arg Ile Ile Asp Phe Lys Glu Ile Gln Tyr Gly Tyr Arg Arg Val Asn Pro Met Tyr Gly Ala Glu Tyr Ile Leu Asp Leu Leu Leu Tyr Lys Lys His Lys Gly Lys Lys Met Thr Val 455 Pro Val Arg Arg His Ala Tyr Leu Gln Gln Thr Phe Ser Lys Ile 470 475 Gln Phe Val Glu His Glu Glu Leu Asp Ala Gln Glu Leu Ala Lys 485 Arg Ile Asn Gln Glu Ser Gly Ser Leu Ser Phe Leu Ser Asn Ser Leu Lys Lys Leu Val Pro Phe Gln Leu Pro Gly Ser Lys Ser Glu 515 His Lys Glu Pro Lys Asp Lys Ile Asn Ile Leu Ile Pro Leu

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Lys	Thr	Cys	Leu	Ile 560	Pro	Asn	Gln	Asn	Val 565	Lys	Leu	Val	Val	Leu 570
Leu	Phe	Asn	Ser	Asp 575	Ser	Asn	Pro	Asp	Lys 580	Ala	Lys	Gln	Val	Glu 585
Leu 1	Met	Arg	Asp	Tyr 590	Arg	Ile	Lys	Tyr	Pro 595	Lys	Ala	Asp	Met	Gln 600
Ile	Leu	Pro	Val	Ser 605	Gly	Glu	Phe	Ser	Arg 610	Ala	Leu	Ala	Leu	Glu 615
Val	Gly	Ser	Ser	Gln 620	Phe	Asn	Asn	Glu	Ser 625	Leu	Leu	Phe	Phe	Cys 630
Asp	Val	Asp	Leu	Val 635	Phe	Thr	Thr	Glu	Phe 640	Leu	Gln	Arg	Cys	Arg 645
Ala	Asn	Thr	Val	Leu 650	Gly	Gln	Gln	Ile	Tyr 655	Phe	Pro	Ile	Ile	Phe 660
Ser	Gln	Tyr	Asp	Pro 665	Lys	Ile	Val	Tyr	Ser 670	Gly	Lys	Val	Pro	Ser 675
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Tyr	Gly	Phe	Gly	Ile 695	Thr	Cys	Ile	Tyr	Lys 700	Gly	Asp	Leu	Val	Arg 705
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Val 1	Asp	Leu	Phe	Asn 725	Lys	Val	Val	Gln	Ala 730	Gly	Leu	Lys	Thr	Phe 735
Arg	Ser	Gln	Glu	Val 740	Gly	Val	Val	His	Val 745	His	His	Pro	Val	Phe 750
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Ser :	Lys	Ala	Ser	Thr 770	Tyr	Gly	Ser	Thr	Gln 775	Gln	Leu	Ala	Glu	Met 780
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35 40 45

Ser Val Pro Ser Gly Glu Pro Gly Arg Glu Lys Lys Ser Asn Ser

218 21812

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Thr	Asn	Pro	Ile	Ser 95	Glu	Glu	Thr	Thr	Thr 100	Phe	Pro	Thr	Gly	Gly 105
Phe	Thr	Pro	Glu	Ile 110	Gly	Lys	Lys	Lys	His 115	Thr	Glu	Ser	Thr	Pro 120
Phe	Trp	Ser	Ile	Lys 125	Pro	Asn	Asn	Val	Ser 130	Ile	Val	Leu	His	Ala 135
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Pro	Ala	Ala	Lys	Gln 155	Thr	Glu	Ala	Pro	Arg 160	Met	Leu	Pro	Val	Val 165
Thr	Glu	Ser	Ser	Thr 170	Ser	Pro	Tyr	Val	Thr 175	Ser	Tyr	Lys	Ser	Pro 180
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Pro	Glu	Glu	Phe	Gly 215	Lys	His	Pro	Glu	Ser 220	Trp	Asn	Asn	Asp	Asp 225
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Asn	Met	Leu	Cys	Asn 305	Ser	Arg	Ser	Lys	Leu 310	Tyr	Glu	Tyr	Leu	Asp 315
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Leu Leu Lys Val Tyr 350

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<213> Homo sapiens

<400> 266

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ccaacaatgg gtattgggtc ctcagactga caacagaaca tttgtatttc 1300
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agtaggggtc ttcctggact atgagggtgg gaccatctcc ttcttcaata 1400
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ttqttqaqac cctatatcca gcatgcgatg tatgacgagg aaaaggggac 1500
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cttaaagggc cccacaccac agacccagac acagccaagg gagagtgctc 1600
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cacaacetee caggeteete atttgetagt caeggacagt gatteetgee 1900
tcacaqqtqa aqattaaaqa qacaacqaat qtgaatcatg cttgcaggtt 1950
tgagggcaca gtgtttgcta atgatgtgtt tttatattat acattttccc 2000
accataaact ctgtttgctt attccacatt aatttacttt tctctatacc 2050
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gataccaaaa ccaggcaaag aaaacagaag aagaggaagg aaaactacag 2200
gtccatatcc ctcattaaca cagacacaaa aattctaaat aaaattttaa 2250
caaattaaac taaacaatat atttaaagat gatatataac tactcagtgt 2300
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gtaattcagc acattaataa agtaaaaaag aaaaccataa aaaaaaaaa 2400
aaa 2403
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<210> 267

<211> 466

<212> PRT

<213> Homo sapiens

<400> 267

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Ser Gly Gln Trp Gln Val Thr Gly Pro Gly Lys Phe Val Gln Ala

1.87

20 25 30

Leu Val Gly Glu Asp Ala Val Phe Ser Cys Ser Leu Phe Pro Glu

Thr Ser Ala Glu Ala Met Glu Val Arg Phe Phe Arg Asn Gln Phe 50 55 60

His Ala Val Val His Leu Tyr Arg Asp Gly Glu Asp Trp Glu Ser 65 70 75

Lys Gln Met Pro Gln Tyr Arg Gly Arg Thr Glu Phe Val Lys Asp 80 85 90

Ser Ile Ala Gly Gly Arg Val Ser Leu Arg Leu Lys Asn Ile Thr 95 100 105

Pro Ser Asp Ile Gly Leu Tyr Gly Cys Trp Phe Ser Ser Gln Ile 110 115 120

Tyr Asp Glu Glu Ala Thr Trp Glu Leu Arg Val Ala Ala Leu Gly
125 130 135

Ser Leu Pro Leu Ile Ser Ile Val Gly Tyr Val Asp Gly Gly Ile 140 145 150

Gln Leu Cys Leu Ser Ser Gly Trp Phe Pro Gln Pro Thr Ala 155 160 165

Lys Trp Lys Gly Pro Gln Gly Gln Asp Leu Ser Ser Asp Ser Arg 170 175 180

Ala Asn Ala Asp Gly Tyr Ser Leu Tyr Asp Val Glu Ile Ser Ile 185 190 195

Ile Val Gl
n Glu Asn Ala Gly Ser Ile Leu Cys Ser Ile His Leu 200 205 210

Ala Glu Gln Ser His Glu Val Glu Ser Lys Val Leu Ile Gly Glu 215 220 225

Thr Phe Phe Gln Pro Ser Pro Trp Arg Leu Ala Ser Ile Leu Leu 230 235 240

Gly Leu Cys Gly Ala Leu Cys Gly Val Val Met Gly Met Ile 245 250 255

Ile Val Phe Phe Lys Ser Lys Gly Lys Ile Gln Ala Glu Leu Asp 260 265 270

Trp Arg Arg Lys His Gly Gln Ala Glu Leu Arg Asp Ala Arg Lys 275 280 280

His Ala Val Glu Val Thr Leu Asp Pro Glu Thr Ala His Pro Lys 290 295 300

Leu Cys Val Ser Asp Leu Lys Thr Val Thr His Arg Lys Ala Pro 305 310 315

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Gln Glu Val Pro His Ser Glu Lys Arg Phe Thr Arg Lys Ser Val
                                     325
Val Ala Ser Gln Gly Phe Gln Ala Gly Arg His Tyr Trp Glu Val
                                                         345
                335
Asp Val Gly Gln Asn Val Gly Trp Tyr Val Gly Val Cys Arg Asp
Asp Val Asp Arg Gly Lys Asn Asn Val Thr Leu Ser Pro Asn Asn
                                     370
Gly Tyr Trp Val Leu Arg Leu Thr Thr Glu His Leu Tyr Phe Thr
                                     385
Phe Asn Pro His Phe Ile Ser Leu Pro Pro Ser Thr Pro Pro Thr
                395
Arg Val Gly Val Phe Leu Asp Tyr Glu Gly Gly Thr Ile Ser Phe
                410
Phe Asn Thr Asn Asp Gln Ser Leu Ile Tyr Thr Leu Leu Thr Cys
                                     430
                425
Gln Phe Glu Gly Leu Leu Arg Pro Tyr Ile Gln His Ala Met Tyr
                440
Asp Glu Glu Lys Gly Thr Pro Ile Phe Ile Cys Pro Val Ser Trp
                                     460
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Gly

<210> 268

<211> 2103

<212> DNA

<213> Homo sapiens

<400> 268

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tggtgaggge taggaaaaga gtttgttggg aaccetgggt tateggeete 100
gteatettea tateeetgat tgteetggea gtgtgeattg gaeteactgt 150
teattatgtg agatataate aaaagaagae etacaattae tatageaeat 200
tgteatttae aactgacaaa etatatgetg agtttggeag agaggettet 250
aacaattta eagaaatgag eeagagaett gaateaatgg tgaaaaatge 300
attttataaa teteeattaa gggaagaatt tgteaagtet eaggttatea 350
agtteagtea acagaageat ggagtgttgg eteatatget gttgatttgt 400
agattteaet etaetgagga teetgaaaet gtagataaaa ttgtteaaet 450
tgttttaeat gaaaagetge aagatgetgt aggaeeeeet aaagtagate 500

MARKET AND THE REST OF A STATE OF THE STATE

ctcactcagt taaaattaaa aaaatcaaca agacagaaac agacagctat 550 ctaaaccatt gctgcggaac acgaagaagt aaaactctag gtcagagtct 600 caggategtt ggtgggacag aagtagaaga gggtgaatgg ccctggcagg 650 ctagcctgca gtgggatggg agtcatcgct gtggagcaac cttaattaat 700 gccacatggc ttgtgagtgc tgctcactgt tttacaacat ataagaaccc 750 tgccagatgg actgcttcct ttggagtaac aataaaacct tcgaaaatga 800 aacggggtct ccggagaata attgtccatg aaaaatacaa acacccatca 850 catgactatg atatttetet tgcagagett tetagecetg tteectacae 900 aaatgcagta catagagttt gtctccctga tgcatcctat gagtttcaac 950 caggigatgt gatgittgtg acaggattig gagcactgaa aaatgatggt 1000 tacagtcaaa atcatcttcg acaagcacag gtgactctca tagacgctac 1050 aacttgcaat gaacctcaag cttacaatga cgccataact cctagaatgt 1100 tatgtgctgg ctccttagaa ggaaaaacag atgcatgcca gggtgactct 1150 ggaggaccac tggttagttc agatgctaga gatatctggt accttgctgg 1200 aatagtgagc tggggagatg aatgtgcgaa acccaacaag cctggtgttt 1250 atactagagt tacggccttg cgggactgga ttacttcaaa aactggtatc 1300 taagagacaa aagcctcatg gaacagataa cattttttt tgttttttgg 1350 gtgtggaggc catttttaga gatacagaat tggagaagac ttgcaaaaca 1400 gctagatttg actgatctca ataaactgtt tgcttgatgc atgtattttc 1450 ttcccagctc tgttccgcac gtaagcatcc tgcttctgcc agatcaactc 1500 tgtcatctgt gagcaatagt tgaaacttta tgtacataga gaaatagata 1550 atacaatatt acattacagc ctgtattcat ttgttctcta gaagttttgt 1600 cagaattttg acttgttgac ataaatttgt aatgcatata tacaatttga 1650 agcactcctt ttcttcagtt cctcagctcc tctcatttca gcaaatatcc 1700 attttcaagg tgcagaacaa ggagtgaaag aaaatataag aagaaaaaaa 1750 tcccctacat tttattggca cagaaaagta ttaggtgttt ttcttagtgg 1800 aatattagaa atgatcatat tcattatgaa aggtcaagca aagacagcag 1850 aataccaatc acttcatcat ttaggaagta tgggaactaa gttaaggaag 1900 tccagaaaga agccaagata tatccttatt ttcatttcca aacaactact 1950

atgataaatg tgaagaagat tctgttttt tgtgacctat aataattata 2000 caaacttcat gcaatgtact tgttctaagc aaattaaagc aaatatttat 2050 ttaacattgt tactgaggat gtcaacatat aacaataaaa tataaatcac 2100 cca 2103

<210> 269

<211> 423

<212> PRT

<213> Homo sapiens

<400> 269

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Trp Glu Pro Trp Val Ile Gly Leu Val Ile Phe Ile Ser Leu Ile 20 25 30

Val Leu Ala Val Cys Ile Gly Leu Thr Val His Tyr Val Arg Tyr
35 40 45

Asn Gln Lys Lys Thr Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr
50 55 60

Thr Asp Lys Leu Tyr Ala Glu Phe Gly Arg Glu Ala Ser Asn Asn 65 70 75

Phe Thr Glu Met Ser Gln Arg Leu Glu Ser Met Val Lys Asn Ala 80 85 90

Phe Tyr Lys Ser Pro Leu Arg Glu Glu Phe Val Lys Ser Gln Val 95 100 105

Ile Lys Phe Ser Gln Gln Lys His Gly Val Leu Ala His Met Leu
110 115 120

Leu Ile Cys Arg Phe His Ser Thr Glu Asp Pro Glu Thr Val Asp 125 130 135

Lys Ile Val Gln Leu Val Leu His Glu Lys Leu Gln Asp Ala Val 140 145 150

Gly Pro Pro Lys Val Asp Pro His Ser Val Lys Ile Lys Lys Ile 155 160 165

Asn Lys Thr Glu Thr Asp Ser Tyr Leu Asn His Cys Cys Gly Thr 170 175 180

Arg Arg Ser Lys Thr Leu Gly Gln Ser Leu Arg Ile Val Gly Gly 185 190 195

Thr Glu Val Glu Glu Gly Glu Trp Pro Trp Gln Ala Ser Leu Gln $200 \hspace{1cm} 205 \hspace{1cm} 210 \hspace{1cm}$

Trp Asp Gly Ser His Arg Cys Gly Ala Thr Leu Ile Asn Ala Thr 215 220 225

tr pen n

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Trp Leu Val Ser Ala Ala His Cys Phe Thr Thr Tyr Lys Asn Pro
                                    235
Ala Arg Trp Thr Ala Ser Phe Gly Val Thr Ile Lys Pro Ser Lys
                                    250
                245
Met Lys Arg Gly Leu Arg Arg Ile Ile Val His Glu Lys Tyr Lys
His Pro Ser His Asp Tyr Asp Ile Ser Leu Ala Glu Leu Ser Ser
                275
                                    280
                                                         285
Pro Val Pro Tyr Thr Asn Ala Val His Arg Val Cys Leu Pro Asp
Ala Ser Tyr Glu Phe Gln Pro Gly Asp Val Met Phe Val Thr Gly
                                     310
Phe Gly Ala Leu Lys Asn Asp Gly Tyr Ser Gln Asn His Leu Arg
Gln Ala Gln Val Thr Leu Ile Asp Ala Thr Thr Cys Asn Glu Pro
                335
Gln Ala Tyr Asn Asp Ala Ile Thr Pro Arg Met Leu Cys Ala Gly
                350
Ser Leu Glu Gly Lys Thr Asp Ala Cys Gln Gly Asp Ser Gly Gly
                                     370
Pro Leu Val Ser Ser Asp Ala Arg Asp Ile Trp Tyr Leu Ala Gly
                                     385
                380
Ile Val Ser Trp Gly Asp Glu Cys Ala Lys Pro Asn Lys Pro Gly
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Val Tyr Thr Arg Val Thr Ala Leu Arg Asp Trp Ile Thr Ser Lys
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Thr Gly Ile
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<210> 270

<211> 1170

<212> DNA

<213> Homo sapiens

<400> 270 gtcgaaggtt ataaaagctt ccagccaaac ggcattgaag ttgaagatac 50 aacctgacag cacagcctga gatcttgggg atccctcagc ctaacaccca 100 cagacgtcag ctggtggatt cccgctgcat caaggcctac ccactgtctc 150 catgctgggc tctccctgcc ttctgtggct cctggccgtg accttcttgg 200 ttcccagagc tcagcccttg gcccctcaag actttgaaga agaggaggca 250 gatgagactg agacggcgtg gccgcctttg ccggctgtcc cctgcgacta 300 cgaccactgc cgacacctgc aggtgccctg caaggagcta cagagggtcg 350 ggccggcggc ctgcctgtgc ccaggactct ccagccccgc ccagccgccc 400 gacccgccgc gcatgggaga agtgcgcatt gcggccgaag agggccgcgc 450 agtggtccac tggtgtgccc ccttctcccc ggtcctccac tactggctgc 500 tgctttggga cggcagcgag gctgcgcaga aggggccccc gctgaacgct 550 acggtccgca gagccgaact gaaggggctg aagccagggg gcatttatgt 600 cgtttgcgta gtggccgcta acgaggccgg ggcaagccgc gtgccccagg 650 ctggaggaga gggcctcgag ggggccgaca tccctgcctt cgggccttgc 700 ageogeettg eggtgeegee caaceeege actetggtee aegeggeegt 750 cggggtgggc acggccctgg ccctgctaag ctgtgccgcc ctggtgtggc 800 acttctgcct gcgcgatcgc tggggctgcc cgcgccgagc cgccgcccga 850 gccgcagggg cgctctgaaa ggggcctggg ggcatctcgg gcacagacag 900 ccccacctgg ggcgctcagc ctggcccccg ggaaagagga aaacccgctg 950 cctccaggga gggctggacg gcgagctggg agccagcccc aggctccagg 1000 gccacggcgg agtcatggtt ctcaggactg agcgcttgtt taggtccggt 1050 acttggcgct ttgtttcctg gctgaggtct gggaaggaat agaaaggggc 1100 ccccaatttt tttttaagcg gccagataat aaataatgta acctttgcgg 1150 ttaaaaaaaa aaaaaaaaa 1170

<210> 271

<211> 238

<212> PRT

<213> Homo sapiens

<400> 271

Met Leu Gly Ser Pro Cys Leu Leu Trp Leu Leu Ala Val Thr Phe
1 5 10 15

Leu Val Pro Arg Ala Gln Pro Leu Ala Pro Gln Asp Phe Glu Glu 20 25 30

Glu Glu Ala Asp Glu Thr Glu Thr Ala Trp Pro Pro Leu Pro Ala 35 40 45

Val Pro Cys Asp Tyr Asp His Cys Arg His Leu Gln Val Pro Cys
50 55 60

Lys Glu Leu Gln Arg Val Gly Pro Ala Ala Cys Leu Cys Pro Gly
65 70 75

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Leu Ser Ser Pro Ala Gln Pro Pro Asp Pro Pro Arg Met Gly Glu
Val Arg Ile Ala Ala Glu Glu Gly Arg Ala Val Val His Trp Cys
                                    100
                                                         105
Ala Pro Phe Ser Pro Val Leu His Tyr Trp Leu Leu Trp Asp
Gly Ser Glu Ala Ala Gln Lys Gly Pro Pro Leu Asn Ala Thr Val
Arg Arg Ala Glu Leu Lys Gly Leu Lys Pro Gly Gly Ile Tyr Val
Val Cys Val Val Ala Ala Asn Glu Ala Gly Ala Ser Arg Val Pro
                155
Gln Ala Gly Gly Glu Gly Leu Glu Gly Ala Asp Ile Pro Ala Phe
Gly Pro Cys Ser Arg Leu Ala Val Pro Pro Asn Pro Arg Thr Leu
                                    190
                185
Val His Ala Ala Val Gly Val Gly Thr Ala Leu Ala Leu Leu Ser
                                                         210
                200
                                    205
Cys Ala Ala Leu Val Trp His Phe Cys Leu Arg Asp Arg Trp Gly
                                                         225
                                    220
                215
Cys Pro Arg Arg Ala Ala Ala Arg Ala Ala Gly Ala Leu
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<210> 272

<211> 2397

<212> DNA

<213> Homo sapiens

<400> 272

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aagtttgctt gtcattttct gtgtagaact ggcttgtggc gtttggacat 550 atgaacagga acttatggtt ccagtacaat ggtcagatat ggtcactttg 600 aaagccagga tgacaaatta tggattacct agatatcggt ggcttactca 650 tgcttggaat tttttcaga gagagtttaa gtgctgtgga gtagtatatt 700 tcactgactg gttggaaatg acagagatgg actggccccc agattcctgc 750 tgtgttagag aattcccagg atgttccaaa caggcccacc aggaagatct 800 cagtgacctt tatcaagagg gttgtgggaa gaaaatgtat tcctttttga 850 gaggaaccaa acaactgcag gtgctgaggt ttctgggaat ctccattggg 900 gtgacacaaa tcctggccat gattctcacc attactctgc tctgggctct 950 gtattatgat agaagggagc ctgggacaga ccaaatgatg tccttgaaga 1000 atgacaactc tcagcacctg tcatgtccct cagtagaact gttgaaacca 1050 agcctgtcaa gaatctttga acacacatcc atggcaaaca gctttaatac 1100 acactttgag atggaggagt tataaaaaga aatgtcacag aagaaaacca 1150 caaacttgtt ttattggact tgtgaatttt tgagtacata ctatgtgttt 1200 cagaaatatg tagaaataaa aatgttgcca taaaataaca cctaagcata 1250 tactattcta tgctttaaaa tgaggatgga aaagtttcat gtcataagtc 1300 accacctgga caataattga tgcccttaaa atgctgaaga cagatgtcat 1350 acceactgtg tagectgtgt atgactttta ctgaacacag ttatgttttg 1400 aggcagcatg gtttgattag catttccgca tccatgcaaa cgagtcacat 1450 atggtgggac tggagccata gtaaaggttg atttacttct accaactagt 1500 atataaagta ctaattaaat gctaacatag gaagttagaa aatactaata 1550 acttttatta ctcagcgatc tattcttctg atgctaaata aattatatat 1600 cagaaaactt tcaatattgg tgactaccta aatgtgattt ttgctggtta 1650 ctaaaatatt cttaccactt aaaagagcaa gctaacacat tgtcttaagc 1700 tgatcaggga ttttttgtat ataagtctgt gttaaatctg tataattcag 1750 tcgatttcag ttctgataat gttaagaata accattatga aaaggaaaat 1800 ttgtcctgta tagcatcatt atttttagcc tttcctgtta ataaagcttt 1850 actattctgt cctgggctta tattacacat ataactgtta tttaaatact 1900 taaccactaa ttttgaaaat taccagtgtg atacatagga atcattattc 1950 agaatgtagt ctggtcttta ggaagtatta ataagaaaat ttgcacataa 2000 cttagttgat tcagaaagga cttgtatgct gttttctcc caaatgaaga 2050 ctctttttga cactaaacac tttttaaaaa gcttatcttt gccttctcca 2100 aacaagaagc aatagtctcc aagtcaatat aaattctaca gaaaatagtg 2150 ttcttttct ccagaaaaat gcttgtgaga atcattaaaa catgtgacaa 2200 tttagagatt ctttgttta tttcactgat taatatactg tggcaaatta 2250 cacagattat taaattttt tacaagagta tagtatattt atttgaaatg 2300 ggaaaagtgc attttactgt attttgtgta ttttgtttat ttctcagaat 2350 atggaaagaa aattaaaatg tgtcaataaa tattttctag agagtaa 2397

<210> 273

<211> 305

<212> PRT

<213> Homo sapiens

<400> 273

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Ala Leu Asn Leu Leu Phe Trp Leu Met Ser Ile Ser Val Leu Ala 20 25 30

Val Ser Ala Trp Met Arg Asp Tyr Leu Asn Asn Val Leu Thr Leu 35 40 45

Thr Ala Glu Thr Arg Val Glu Glu Ala Val Ile Leu Thr Tyr Phe
50 55 60

Pro Val Val His Pro Val Met Ile Ala Val Cys Cys Phe Leu Ile 65 70 75

Ile Val Gly Met Leu Gly Tyr Cys Gly Thr Val Lys Arg Asn Leu 80 85 90

Leu Leu Ala Trp Tyr Phe Gly Ser Leu Leu Val Ile Phe Cys 95 100 105

Val Glu Leu Ala Cys Gly Val Trp Thr Tyr Glu Gln Glu Leu Met
110 115 120

Val Pro Val Gln Trp Ser Asp Met Val Thr Leu Lys Ala Arg Met 125 130 135

Thr Asn Tyr Gly Leu Pro Arg Tyr Arg Trp Leu Thr His Ala Trp
140 145 150

Asn Phe Phe Gln Arg Glu Phe Lys Cys Cys Gly Val Val Tyr Phe 155 160 165

Thr Asp Trp Leu Glu Met Thr Glu Met Asp Trp Pro Pro Asp Ser

	170	175	180						
Cys Cys Val Ar	g Glu Phe Pro 185	Gly Cys Ser Lys G 190	Gln Ala His Gln 195						
Glu Asp Leu Se	er Asp Leu Tyr 200	Gln Glu Gly Cys G 205	Gly Lys Lys Met 210						
Tyr Ser Phe Le	u Arg Gly Thr 215	Lys Gln Leu Gln V 220	Val Leu Arg Phe 225						
Leu Gly Ile Se	er Ile Gly Val 230	Thr Gln Ile Leu F 235	Ala Met Ile Leu 240						
Thr Ile Thr Le	eu Leu Trp Ala 245	Leu Tyr Tyr Asp A	Arg Arg Glu Pro 255						
Gly Thr Asp Gl	n Met Met Ser 260	Leu Lys Asn Asp A	Asn Ser Gln His 270						
Leu Ser Cys P	co Ser Val Glu 275	Leu Leu Lys Pro S 280	Ser Leu Ser Arg 285						
Ile Phe Glu H	s Thr Ser Met 290	Ala Asn Ser Phe A	Asn Thr His Phe 300						
Glu Met Glu G	Lu Leu 305								
<210> 274									

<210> 274 <211> 2063 <212> DNA <213> Homo sapiens

<400> 274
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ttctgacctg ctggccagcc aggacctgtg tggggaggcc ctcctgctgc 150
cttggggtga caatctcagc tccaggctac agggagaccg ggaggatcac 200
agagccagca tgttacagga tcctgacagt gatcaacctc tgaacagct 250
cgatgtcaaa cccctgcgca aaccccgtat ccccatggag accttcagaa 300
aggtggggat ccccatcatc atagcactac tgagcctggc gagtatcatc 350
attgtggttg tcctcatcaa ggtgattctg gataaatact acttcctctg 400
cgggcagcct ctccacttca tcccgaggaa gcagctgtgt gacggagagc 450
tggactgtcc cttgggggag gacgaggagc actgtgtcaa gagcttccc 500
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- Ile Ile Ile Val Val Leu Ile Lys Val Ile Leu Asp Lys Tyr
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- Tyr Phe Leu Cys Gly Gln Pro Leu His Phe Ile Pro Arg Lys Gln 65 70 75
- Leu Cys Asp Gly Glu Leu Asp Cys Pro Leu Gly Glu Asp Glu Glu 80 85 90
- His Cys Val Lys Ser Phe Pro Glu Gly Pro Ala Val Ala Val Arg 95 100 105
- Leu Ser Lys Asp Arg Ser Thr Leu Gln Val Leu Asp Ser Ala Thr 110 115 120
- Gly Asn Trp Phe Ser Ala Cys Phe Asp Asn Phe Thr Glu Ala Leu 125 130 135
- Alá Glu Thr Ala Cys Arg Gln Met Gly Tyr Ser Arg Ala Val Glu 140 145 150
- Ile Gly Pro Asp Gln Asp Leu Asp Val Val Glu Ile Thr Glu Asn 155 160 165
- Ser Gln Glu Leu Arg Met Arg Asn Ser Ser Gly Pro Cys Leu Ser 170 175 180
- Gly Ser Leu Val Ser Leu His Cys Leu Ala Cys Gly Lys Ser Leu 185 190 195
- Lys Thr Pro Arg Val Val Gly Gly Glu Glu Ala Ser Val Asp Ser 200 205 210
- Trp Pro Trp Gln Val Ser Ile Gln Tyr Asp Lys Gln His Val Cys
- Gly Gly Ser Ile Leu Asp Pro His Trp Val Leu Thr Ala Ala His 230 235 240
- Cys Phe Arg Lys His Thr Asp Val Phe Asn Trp Lys Val Arg Ala 245 250 255

9 19 ppl 1

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Val	Pro	Asn	Ser	Ile 575		Glu	Leu	Pro	Cys 580	Pro	His	Leu	Ser	Ala 585

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Thr Leu Ala Leu Asp Pro Glu Leu Ala Gly Ile Pro Arg Glu His
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Val Lys Val Pro Leu Thr Arg Val Ser Gly Gly Ala Ala Leu Ala
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Leu Ser Tyr Val Pro 185 Val Phe Arg Ser Leu Leu Thr Asp His Met 195

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Cys Arg Arg Gln Gln His Met Gln Ser Thr 220 Phe Asp Asn Thr Ile 225

Lys Glu His Phe Thr 230 Glu Gly Ser Arg Pro Val Leu Ser His Leu 240

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MILE COLUMN TO THE TOTAL PROPERTY OF THE TAX AND THE T

175

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Phe Gly 290	Asp Ser	Gly	Phe 295	Val	Leu	Val	Thr	Leu 300
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His Trp 335	Pro Lys	Asp	Val 340	His	Leu	Ala	Ala	Asn 345
Asp Trp 350	Leu Pro	Gln	Ser 355	Asp	Leu	Leu	Ala	His 360
Leu Phe 365	Val Thr	His	Gly 370	Gly	Gln	Asn	Ser	Ile 375
Gln His 380	Gly Val	Pro	Met 385	Val	Gly	Ile	Pro	Leu 390
Pro Glu 395	Asn Met	Val	Arg 400	Val	Glu	Ala	Lys	Lys 405
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Arg Gly 515	Ala Arg	Lys	Val 520	Lys	Glu	Thr		
	Pro Ile 275	Pro Ile Lys Pro 275	Pro Ile Lys Pro Val Phe Gly Asp Ser Gly 290 Asn Thr Cys Gln Asn 305 Phe Ala His Leu Pro 320 Asp Trp Pro Lys Asp 335 Asp Trp Leu Pro Gln 350 Bei Phe Val Thr His 365 Pro Glu Asn Met Val 395 Pro Gln Leu Lys Lys 410 Ala Ser Val Ile Leu 445 Ala Ser Val Ile Leu 4470 Leu Val Gly Trp Ile 455 Leu Phe Asp Val Phe 485 Arg Gly Ala Arg Lys	Pro 275 Ile Lys Pro 280 Phe 290 Asp Ser Gly Phe 295 Asn Thr Cys Gln Asn Pro 310 Phe Ala His Leu Pro Gln 325 His Trp Pro Lys Asp Val 340 Asp Trp Leu Pro Gln Ser 355 Leu Phe Val Thr His Gly 370 Gln His Gly Val Pro Met 385 Pro 395 Glu Asn Met Val Arg 400 Ile Gln Leu Lys Lys Leu 410 Lys Gln Ile Met Glu Asp 430 Ala Ser Val Ile Leu Arg 445 Leu Val Gly Trp Ile Asp 460 His Leu Lys Pro Tyr Val 475 Leu Phe Asp Val Phe Val 490 Leu Trp Leu Cys Gly Lys 505 Arg Gly Ala Arg Lys Val	Pro Ile Lys Pro Val Pro Gln 280 Phe Gly Asp Ser Gly Phe Val 295 Asn Thr Cys Gln Asn Pro Glu 310 Phe Ala His Leu Pro Gln Gly 325 His Trp Pro Lys Asp Val His 340 Asp Trp Leu Pro Gln Ser Asp 355 Leu Phe Val Thr His Gly Gly 370 Gln His Gly Val Pro Met Val Asg Val 415 Pro Glu Asn Met Val Arg Val 410 Fro Gln Ile Met Glu Asp Lys 425 Ala Ser Val Ile Leu Arg Ser 445 Leu Val Gly Trp Ile Asp His 450 Leu Val Gly Trp Ile Asp His 450 His Leu Lys Pro Tyr Val Phe 470 Leu Phe Asp Val Phe Val Phe 490 Leu Trp Leu Cys Gly Lys Leu Sos Leu Sos Leu Cys Gly Lys Lys Lys Leu Cys Gly Lys Lys Lys Lys Leu Cys Gly Lys Lys Lys Lys Lys Lys Lys Lys Lys Ly	Pro 275	Pro le	Pro Ile Lys Pro Val Pro Cla Pro 280 Gln Asp Leu Glu Phe Gly Asp Ser Gly Phe Val Leu Val Thr Asp Thr Cys Gln Asp Fro Gln Gly Val Ile Pro His Trp Pro Lys Asp Val His Leu Ala Ala Asp Trp Leu Pro Gln Ser Asp Leu Ala Ala Asp Trp Leu Pro Gln Ser Asp Leu Ala Ala Asp The Val Trp Met Val Gly Gly Glu Ala Lys Ala Ser Val Lys Leu Lys Arg Trp Leu Ala Ser Val Trp Ile As

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FR - 1961 - 1 1 -

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18 186 1 18

17 1811 11

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<212> PRT

<213> Homo sapiens

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Pro Gly Leu Pro Leu Val Leu Val Leu Ala Leu Gly Ala Gly 20 25 30

Trp Ala Gln Glu Gly Ser Glu Pro Val Leu Leu Glu Gly Glu Cys 35 40 45

Leu Val Val Cys Glu Pro Gly Arg Ala Ala Ala Gly Gly Pro Gly
50 55 60

Gly Ala Ala Leu Gly Glu Ala Pro Pro Gly Arg Val Ala Phe Ala
65 70 75

Ala Val Arg Ser His His His Glu Pro Ala Gly Glu Thr Gly Asn 80 85 90

Gly Thr Ser Gly Ala Ile Tyr Phe Asp Gln Val Leu Val Asn Glu 95 100 105

Gly Gly Gly Phe Asp Arg Ala Ser Gly Ser Phe Val Ala Pro Val 110 115 120

Arg Gly Val Tyr Ser Phe Arg Phe His Val Val Lys Val Tyr Asn 125 130 135

Arg Gln Thr Val Gln Val Ser Leu Met Leu Asn Thr Trp Pro Val 140 145 150

Ile Ser Ala Phe Ala Asn Asp Pro Asp Val Thr Arg Glu Ala Ala 155 160 165

Thr Ser Ser Val Leu Leu Pro Leu Asp Pro Gly Asp Arg Val Ser

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180
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ttcccgcggg gccgtgactg ggcgggcttc agccatgaag accctcatag 200 ccgcctactc cggggtcctg cgcggcgagc gtcaggccga ggctgaccgg 250 agccagcgct ctcacggagg acctgcgctg tcgcgcgagg ggtctgggag 300 atggggcact ggatccagca tcctctccgc cctccaggac ctcttctctg 350 tcacctggct caataggtcc aaggtggaaa agcagctaca ggtcatctca 400 gtgctccagt gggtcctgtc cttccttgta ctgggagtgg cctgcagtgc 450 catcctcatg tacatattct gcactgattg ctggctcatc gctgtgctct 500 acttcacttg gctggtgttt gactggaaca cacccaagaa aggtggcagg 550 aggtcacagt gggtccgaaa ctgggctgtg tggcgctact ttcgagacta 600 ctttcccatc cagctggtga agacacacaa cctgctgacc accaggaact 650 atatctttgg ataccaccc catggtatca tgggcctggg tgccttctgc 700 aacttcagca cagaggccac agaagtgagc aagaagttcc caggcatacg 750 gccttacctg gctacactgg caggcaactt ccgaatgcct gtgttgaggg 800 agtacctgat gtctggaggt atctgccctg tcagccggga caccatagac 850 tatttgcttt caaagaatgg gagtggcaat gctatcatca tcgtggtcgg 900 gggtgcggct gagtctctga gctccatgcc tggcaagaat gcagtcaccc 950 tgcggaaccg caagggcttt gtgaaactgg ccctgcgtca tggagctgac 1000 ctggttccca tctactcctt tggagagaat gaagtgtaca agcaggtgat 1050 cttcgaggag ggctcctggg gccgatgggt ccagaagaag ttccagaaat 1100 acattggttt cgccccatgc atcttccatg gtcgaggcct cttctcctcc 1150 gacacctggg ggctggtgcc ctactccaag cccatcacca ctgttgtggg 1200 agageceate accatececa agetggagea eccaacecag caagacateg 1250 acctgtacca caccatgtac atggaggccc tggtgaagct cttcgacaag 1300 cacaagacca agttcggcct cccggagact gaggtcctgg aggtgaactg 1350 agccagcett eggggeeaat teeetggagg aaccagetge aaatcaettt 1400 tttgctctgt aaatttggaa gtgtcatggg tgtctgtggg ttatttaaaa 1450 aaaaaaaaa aaaaaaaaa 1570

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Ala Leu Ser Arg Glu Gly Ser Gly Arg Trp Gly Thr Gly Ser Ser
 Ile Leu Ser Ala Leu Gln Asp Leu Phe Ser Val Thr Trp Leu Asn
Arg Ser Lys Val Glu Lys Gln Leu Gln Val Ile Ser Val Leu Gln
 Trp Val Leu Ser Phe Leu Val Leu Gly Val Ala Cys Ser Ala Ile
 Leu Met Tyr Ile Phe Cys Thr Asp Cys Trp Leu Ile Ala Val Leu
 Tyr Phe Thr Trp Leu Val Phe Asp Trp Asn Thr Pro Lys Lys Gly
 Gly Arg Arg Ser Gln Trp Val Arg Asn Trp Ala Val Trp Arg Tyr
 Phe Arg Asp Tyr Phe Pro Ile Gln Leu Val Lys Thr His Asn Leu
 Leu Thr Thr Arg Asn Tyr Ile Phe Gly Tyr His Pro His Gly Ile
Met Gly Leu Gly Ala Phe Cys Asn Phe Ser Thr Glu Ala Thr Glu
Val Ser Lys Lys Phe Pro Gly Ile Arg Pro Tyr Leu Ala Thr Leu
Ala Gly Asn Phe Arg Met Pro Val Leu Arg Glu Tyr Leu Met Ser
 Gly Gly Ile Cys Pro Val Ser Arg Asp Thr Ile Asp Tyr Leu Leu
Ser Lys Asn Gly Ser Gly Asn Ala Ile Ile Ile Val Val Gly Gly
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245

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7 (8) 5

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<400> 297

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Leu Val Gly Phe Val Phe Val Val Ser Gly Leu Val Ile Asn Phe $20 \\ 25 \\ 30$

Val Gln Leu Cys Thr Leu Ala Leu Trp Pro Val Ser Lys Gln Leu
35 40 45

Tyr Arg Arg Leu Asn Cys Arg Leu Ala Tyr Ser Leu Trp Ser Gln
50 55 60

Leu Val Met Leu Leu Glu Trp Trp Ser Cys Thr Glu Cys Thr Leu 65 70 75

Phe Thr Asp Gln Ala Thr Val Glu Arg Phe Gly Lys Glu His Ala 80 85 90

Val Ile Ile Leu Asn His Asn Phe Glu Ile Asp Phe Leu Cys Gly 95 100 105

Trp Thr Met Cys Glu Arg Phe Gly Val Leu Gly Ser Ser Lys Val 110 115 120

Leu Ala Lys Lys Glu Leu Leu Tyr Val Pro Leu Ile Gly Trp Thr 125 130 135

Trp Tyr Phe Leu Glu Ile Val Phe Cys Lys Arg Lys Trp Glu Glu 140 145 150

Asp Arg Asp Thr Val Val Glu Gly Leu Arg Arg Leu Ser Asp Tyr 155 160 165

17 1811 11 11 1

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Pro Glu Tyr Met Trp Phe Leu Leu Tyr Cys Glu Gly Thr Arg Phe
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 Phe Thr Thr Ala Val Lys Cys Leu Arg Gly Thr Val Ala Ala Val
 Tyr Asp Val Thr Leu Asn Phe Arg Gly Asn Lys Asn Pro Ser Leu
 Leu Gly Ile Leu Tyr Gly Lys Lys Tyr Glu Ala Asp Met Cys Val
 Arg Arg Phe Pro Leu Glu Asp Ile Pro Leu Asp Glu Lys Glu Ala
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 Ala Gln Trp Leu His Lys Leu Tyr Gln Glu Lys Asp Ala Leu Gln
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 Glu Ile Tyr Asn Gln Lys Gly Met Phe Pro Gly Glu Gln Phe Lys
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                                     295
 Pro Ala Arg Arg Pro Trp Thr Leu Leu Asn Phe Leu Ser Trp Ala
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 Thr Ile Leu Leu Ser Pro Leu Phe Ser Phe Val Leu Gly Val Phe
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 Ala Ser Gly Ser Pro Leu Leu Ile Leu Thr Phe Leu Gly Phe Val
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Leu Leu Ile Ser Leu Val Gly Lys Gly Leu Ser Leu Ser Cys Gly
35 40 45

Val Gly Gly Arg Gln Ala Gly Leu Arg Leu Ile Arg Pro Trp Val
50 55 60

Arg Arg Glu Gly Lys Ile Asn Phe Tyr Thr Asn Gly Asp Ser Trp
65 70 75

Gly Leu Arg Pro Ala Ser Ser Val Lys Phe Leu Gly Ser Ala Tyr 80 85 90

Thr Phe Phe Ser Leu Thr Trp His Thr Leu Leu Lys Ala Ser Gln 95 100

Gly Phe Ser Leu Phe Leu Gly Ser Lys Tyr Leu Glu Leu Gln Glu
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Pro Ser Trp Ser Gly Pro Cys Pro Pro Gly Gln Leu His Cys Thr 125 130 135

Cys Gly Val Leu Leu Ser Phe Leu

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<210> 304

<211> 109

<212> PRT

<213> Homo sapiens

<400> 304

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Asp Leu Ser Leu Trp Leu Trp Pro Lys Pro Asp Leu His Ser Gly

Thr Arg Thr Glu Val Ser Thr His Thr Val Pro Ser Lys Pro Gly 50 55 60

Thr Ala Ser Pro Cys Trp Pro Leu Ala Gly Ala Val Pro Ser Pro 65 70 75

Thr Val Ser Arg Leu Glu Ala Leu Thr Arg Ala Val Gln Val Ala 80 85 90

Glu Pro Leu Gly Ser Cys Gly Phe Gln Gly Gly Pro Cys Pro Gly 95 100 105

Arg Arg Arg Asp

<210> 305

<211> 989

<212> DNA

<213> Homo sapiens

<400> 305

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<210> 306

<211> 262

<212> PRT

<213> Homo sapiens

<400> 306

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Leu Gly Ser Ala Ala Leu Gly Ala Ala Phe Ala Thr Gly Leu Phe $20 \\ \hspace{1.5cm} 25 \\ \hspace{1.5cm} 30$

Leu Gly Arg Arg Cys Pro Pro Trp Arg Gly Arg Arg Glu Gln Cys 35 40 45

Leu Leu Pro Pro Glu Asp Ser Arg Leu Trp Gln Tyr Leu Leu Ser 50 55 60

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Arg Ser Met Arg Glu His Pro Ala Leu Arg Ser Leu Arg Leu Leu
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Ala Gln Leu Leu Ala Asn Leu Ala Arg Leu Ile Gln Ala Lys Lys
Ala Leu Asp Leu Gly Thr Phe Thr Gly Tyr Ser Ala Leu Ala Leu
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Ala Leu Ala Leu Pro Ala Asp Gly Arg Val Val Thr Cys Glu Val
Asp Ala Gln Pro Pro Glu Leu Gly Arg Pro Leu Trp Arg Gln Ala
Glu Ala Glu His Lys Ile Asp Leu Arg Leu Lys Pro Ala Leu Glu
                                     160
                                                         165
Thr Leu Asp Glu Leu Leu Ala Ala Gly Glu Ala Gly Thr Phe Asp
                170
Val Ala Val Val Asp Ala Asp Lys Glu Asn Cys Ser Ala Tyr Tyr
                185
                                                         195
Glu Arg Cys Leu Gln Leu Leu Arg Pro Gly Gly Ile Leu Ala Val
                200
Leu Arg Val Leu Trp Arg Gly Lys Val Leu Gln Pro Pro Lys Gly
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                                                         225
Asp Val Ala Ala Glu Cys Val Arg Asn Leu Asn Glu Arg Ile Arg
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Leu Thr Leu Ala Phe Lys Ile
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<210> 307

<211> 2272

<212> DNA

<213> Homo sapiens

260

<400> 307

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<210> 308 <211> 671 <212> PRT

<213> Homo sapiens

<400> 308

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Lys Gly Tyr Pro His Trp Pro Ala Arg Ile Asp Asp Ile Ala Asp 20 25 30

Gly Ala Val Lys Pro Pro Pro Asn Lys Tyr Pro Ile Phe Phe 95 45

Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro 50 55 60

Tyr Asp Lys Cys Lys Asp Lys Tyr Gly Lys Pro Asn Lys Arg Lys 65 70 75

Gly Phe Asn Glu Gly Leu Trp Glu Ile Gln Asn Asn Pro His Ala 80 85 90

Ser Tyr Ser Ala Pro Pro Pro Val Ser Ser Ser Asp Ser Glu Ala 95 100 105

Pro Glu Ala Asn Pro Ala Asp Gly Ser Asp Ala Asp Glu Asp Asp 110 115 120

Glu Asp Arg Gly Val Met Ala Val Thr Ala Val Thr Ala Thr Ala 125 130 135

Ala Ser Asp Arg Met Glu Ser Asp Ser Asp Ser Asp Lys Ser Ser

				140					145					150
Asp	Asn	Ser	Gly	Leu 155	Lys	Arg	Lys	Thr	Pro 160	Ala	Leu	Lys	Met	Ser 165
Val	Ser	Lys	Arg	Ala 170	Arg	Lys	Ala	Ser	Ser 175	Asp	Leu	Asp	Gln	Ala 180
Ser	Val	Ser	Pro	Ser 185	Glu	Glu	Glu	Asn	Ser 190	Glu	Ser	Ser	Ser	Glu 195
Ser	Glu	Lys	Thr	Ser 200	Asp	Gln	Asp	Phe	Thr 205	Pro	Glu	Lys	Lys	Ala 210
Ala	Val	Arg	Ala	Pro 215	Arg	Arg	Gly	Pro	Leu 220	Gly	Gly	Arg	Lys	Lys 225
Lys	Lys	Ala	Pro	Ser 230	Ala	Ser	Asp	Ser	Asp 235	Ser	Lys	Ala	Asp	Ser 240
Asp	Gly	Ala	Lys	Pro 245	Glu	Pro	Val	Ala	Met 250	Ala	Arg	Ser	Ala	Ser 255
Ser	Ser	Ser	Ser	Ser 260	Ser	Ser	Ser	Ser	Asp 265	Ser	Asp	Val	Ser	Val 270
Lys	Lys	Pro	Pro	Arg 275	Gly	Arg	Lys	Pro	Ala 280	Glu	Lys	Pro	Leu	Pro 285
Lys	Pro	Arg	Gly	Arg 290	Lys	Pro	Lys	Pro	Glu 295	Arg	Pro	Pro	Ser	Ser 300
Ser	Ser	Ser	Asp	Ser 305	Asp	Ser	Asp	Glu	Val 310	Asp	Arg	Ile	Ser	Glu 315
Trp	Lys	Arg	Arg	Asp 320	Glu	Ala	Arg	Arg	Arg 325	Glu	Leu	Glu	Ala	Arg 330
Arg	Arg	Arg	Glu	Gln 335	Glu	Glu	Glu	Leu	Arg 340	Arg	Leu	Arg	Glu	Gln 345
Glu	Lys	Glu	Glu	Lys 350	Glu	Arg	Arg	Arg	Glu 355	Arg	Ala	Asp	Arg	Gly 360
Glu	Ala	Glu	Arg	Gly 365	Ser	Gly	Gly	Ser	Ser 370	Gly	Asp	Glu	Leu	Arg 375
Glu	Asp	Asp	Glu	Pro 380	Val	Lys	Lys	Arg	Gly 385	Arg	Lys	Gly	Arg	Gly 390
Arg	Gly	Pro	Pro	Ser 395	Ser	Ser	Asp	Ser	Glu 400	Pro	Glu	Ala	Glu	Leu 405
Glu	Arg	Glu	Ala	Lys 410	Lys	Ser	Ala	Lys	Lys 415	Pro	Gln	Ser	Ser	Ser 420
Thr	Glu	Pro	Ala	Arg	Lys	Pro	Gly	Gln	Lys 430	Glu	Lys	Arg	Val	Arg

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Pro Glu Glu Lys Gln Gln Ala Lys Pro Val Lys Val Glu Arg Thr
Arg Lys Arg Ser Glu Gly Phe Ser Met Asp Arg Lys Val Glu Lys
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Lys Lys Glu Pro Ser Val Glu Glu Lys Leu Gln Lys Leu His Ser
                                     475
Glu Ile Lys Phe Ala Leu Lys Val Asp Ser Pro Asp Val Lys Arg
                                     490
Cys Leu Asn Ala Leu Glu Glu Leu Gly Thr Leu Gln Val Thr Ser
                500
Gln Ile Leu Gln Lys Asn Thr Asp Val Val Ala Thr Leu Lys Lys
                515
Ile Arg Arg Tyr Lys Ala Asn Lys Asp Val Met Glu Lys Ala Ala
Glu Val Tyr Thr Arg Leu Lys Ser Arg Val Leu Gly Pro Lys Ile
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Glu Ala Val Gln Lys Val Asn Lys Ala Gly Met Glu Lys Glu Lys
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Ala Glu Glu Lys Leu Ala Gly Glu Glu Leu Ala Gly Glu Glu Ala
                575
Pro Gln Glu Lys Ala Glu Asp Lys Pro Ser Thr Asp Leu Ser Ala
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Pro Val Asn Gly Glu Ala Thr Ser Gln Lys Gly Glu Ser Ala Glu
Asp Lys Glu His Glu Glu Gly Arg Asp Ser Glu Glu Gly Pro Arg
                 620
Cys Gly Ser Ser Glu Asp Leu His Asp Ser Val Arg Glu Gly Pro
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Arg Gly Asp Ser Glu Ala Leu Asp Glu Glu Ser
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<210> 309

<211> 3871

<212> DNA

<213> Homo sapiens

<400> 309

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<210> 310

<211> 777

<212> PRT

<213> Homo sapiens

<400> 310

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Phe His Leu Phe Pro Ala Leu Met Met Leu Ser Met Thr Met Leu 20 25 30

Phe Leu Pro Val Thr Gly Thr Leu Lys Gln Asn Ile Pro Arg Leu 35 40 45

Lys Leu Thr Tyr Lys Asp Leu Leu Leu Ser Asn Ser Cys Ile Pro
50 55 60

Phe Leu Gly Ser Ser Glu Gly Leu Asp Phe Gln Thr Leu Leu Leu 65 70 75

Asp Glu Glu Arg Gly Arg Leu Leu Gly Ala Lys Asp His Ile

				80					85					90
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Gly	Lys	Asp	Ala	Asn 125	Thr	Glu	Cys	Ala	Asn 130	Phe	Ile	Arg	Val	Leu 135
Gln	Pro	Tyr	Asn	Lys 140	Thr	His	Ile	Tyr	Val 145	Cys	Gly	Thr	Gly	Ala 150
Phe	His	Pro	Ile	Cys 155	Gly	Tyr	Ile	Asp	Leu 160	Gly	Val	Tyr	Lys	Glu 165
Asp	Ile	Ile	Phe	Lys 170	Leu	Asp	Thr	His	Asn 175	Leu	Glu	Ser	Gly	Arg 180
Leu	Lys	Cys	Pro	Phe 185	Asp	Pro	Gln	Gln	Pro 190	Phe	Ala	Ser	Val	Met 195
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Lys	Asp	Thr	Ala	Phe 215	Thr	Arg	Ser	Leu	Gly 220	Pro	Thr	His	Asp	His 225
His	Tyr	Ile	Arg	Thr 230	Asp	Ile	Ser	Glu	His 235	Tyr	Trp	Leu	Asn	Gly 240
Ala	Lys	Phe	Ile	Gly 245	Thr	Phe	Phe	Ile	Pro 250	Asp	Thr	Tyr	Asn	Pro 255
Asp	Asp	Asp	Lys	Ile 260	Tyr	Phe	Phe	Phe	Arg 265	Glu	Ser	Ser	Gln	Glu 270
Gly	Ser	Thr	Ser	Asp 275	Lys	Thr	Ile	Leu	Ser 280	Arg	Val	Gly	Arg	Val 285
Cys	Lys	Asn	Asp	Val 290	Gly	Gly	Gln	Arg	Ser 295	Leu	Ile	Asn	Lys	Trp 300
Thr	Thr	Phe	Leu	Lys 305		Arg	Leu	Ile	Cys 310	Ser	Ile	Pro	Gly	Ser 315
Asp	Gly	Ala	Asp	Thr 320	Tyr	Phe	Asp	Glu	Leu 325	Gln	Asp	Ile	Tyr	Leu 330
Leu	Pro	Thr	Arg	Asp 335		Arg	Asn	Pro	Val 340	Val	Tyr	Gly	Val	Phe 345
Thr	Thr	Thr	Ser	Ser 350		Phe	Lys	Gly	Ser 355	Ala	Val	Cys	Val	Tyr 360
Ser	Met	Ala	Asp	Ile 365		Ala	Val	Phe	Asn 370	Gly	Pro	Tyr	Ala	His 375

Lys Glu Ser Ala Asp His Arg Trp Val Gln Tyr Asp Gly Arg Ile Pro Tyr Pro Arg Pro Gly Thr Cys Pro Ser Lys Thr Tyr Asp Pro 405 Leu Ile Lys Ser Thr Arg Asp Phe Pro Asp Asp Val Ile Ser Phe Ile Lys Arg His Ser Val Met Tyr Lys Ser Val Tyr Pro Val Ala Gly Gly Pro Thr Phe Lys Arg Ile Asn Val Asp Tyr Arg Leu Thr Gln Ile Val Val Asp His Val Ile Ala Glu Asp Gly Gln Tyr Asp Val Met Phe Leu Gly Thr Asp Ile Gly Thr Val Leu Lys Val Val Ser Ile Ser Lys Glu Lys Trp Asn Met Glu Glu Val Val Leu Glu 485 Glu Leu Gln Ile Phe Lys His Ser Ser Ile Ile Leu Asn Met Glu 500 Leu Ser Leu Lys Gln Gln Gln Leu Tyr Ile Gly Ser Arg Asp Gly 515 Leu Val Gln Leu Ser Leu His Arg Cys Asp Thr Tyr Gly Lys Ala 530 Cys Ala Asp Cys Cys Leu Ala Arg Asp Pro Tyr Cys Ala Trp Asp Gly Asn Ala Cys Ser Arg Tyr Ala Pro Thr Ser Lys Arg Arg Ala 560 Arg Arg Gln Asp Val Lys Tyr Gly Asp Pro Ile Thr Gln Cys Trp 575 Asp Ile Glu Asp Ser Ile Ser His Glu Thr Ala Asp Glu Lys Val 590 Ile Phe Gly Ile Glu Phe Asn Ser Thr Phe Leu Glu Cys Ile Pro 605 Lys Ser Gln Gln Ala Thr Ile Lys Trp Tyr Ile Gln Arg Ser Gly 620 Asp Glu His Arg Glu Glu Leu Lys Pro Asp Glu Arg Ile Ile Lys 635 Thr Glu Tyr Gly Leu Leu Ile Arg Ser Leu Gln Lys Lys Asp Ser 650 Gly Met Tyr Tyr Cys Lys Ala Gln Glu His Thr Phe Ile His Thr

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<223> Synthetic construct.

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<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 315

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Asp Lys Ala Leu	Asp Phe Pro 335	Gly Phe Leu Asp 340	Met Met Ala Pro 345
Arg Leu Arg Pro	Met Arg Pro 350	Pro Pro Pro Pro 355	Pro Ala Lys Ala 360
Pro Asp Pro Gly	His Pro Asp 365	Pro Leu Thr 370	
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<213> Homo sapiens

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<400> 317

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Leu Pro Ser Ala Arg Leu Ala Ser Pro Leu Pro Arg Glu Glu Glu 50 55 60

Ile Val Phe Pro Glu Lys Leu Asn Gly Ser Val Leu Pro Gly Ser 65 70 75

Gly Ala Pro Ala Arg Leu Leu Cys Arg Leu Gln Ala Phe Gly Glu 80 85 90

Thr Leu Leu Glu Leu Glu Gln Asp Ser Gly Val Gln Val Glu 95 100 105

Gly Leu Thr Val Gln Tyr Leu Gly Gln Ala Pro Glu Leu Leu Gly

Gly Ala Glu Pro Gly Thr Tyr Leu Thr Gly Thr Ile Asn Gly Asp 125 130 135

Pro Glu Ser Val Ala Ser Leu His Trp Asp Gly Gly Ala Leu Leu

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Tyr	Leu	Leu	Thr	Val 245	Met	Ala	Ala	Ala	Ala 250	Lys	Ala	Phe	Lys	His 255
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His	Glu	Leu	Gly	His 365		Phe	Asn	Met	Leu 370	His	Asp	Asn	Ser	Lys 375
Pro	Cys	Ile	Ser	Leu 380		Gly	Pro	Leu	Ser 385	Thr	Ser	: Arg	His	Val 390
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Pro	Cys	Ser	: Ala	Arc 410		: Ile	. Thr	Asp	Phe 415	e Leu	Asp	Asn	Gly	Tyr 420
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Gln	Cys	Ala	Ala	Tyr 590	Asn	His	Arg	Thr	Asp 595	Leu	Phe	Lys	Ser	Phe 600
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Tyr	Туг	Val	Leu	Glu 635	Pro	Arg	Val	Val	Asp 640	Gly	Thr	Pro	Cys	Ser 645
Pro	Asp	Ser	Ser	Ser 650	Val	Cys	Val	Gln	Gly 655	Arg	Cys	Ile	His	Ala 660
Gly	Cys	Asp	Arg	Ile 665		Gly	Ser	Lys	Lys 670	Lys	Phe	Asp	Lys	Cys 675
Met	Val	Cys	Gly	Gly 680		Gly	Ser	Gly	Cys 685	Ser	Lys	Gln	Ser	Gly 690
Ser	Phe	Arg	Lys	Phe 695		Tyr	Gly	Tyr	Asn 700	Asn	Val	Val	Thr	Ile 705
Pro	Ala	Gly	Ala	Thr 710		Ile	Leu	Val	Arg 715	Gln	Gln	Gly	Asn	Pro 720
Gly	His	Arg	Ser	Ile	Tyr	Leu	Ala	Leu	Lys	Leu	Pro	Asp	Gly	Ser

735 730 725 Tyr Ala Leu Asn Gly Glu Tyr Thr Leu Met Pro Ser Pro Thr Asp 745 Val Val Leu Pro Gly Ala Val Ser Leu Arg Tyr Ser Gly Ala Thr 755 760 Ala Ala Ser Glu Thr Leu Ser Gly His Gly Pro Leu Ala Gln Pro Leu Thr Leu Gln Val Leu Val Ala Gly Asn Pro Gln Asp Thr Arg 790 Leu Arg Tyr Ser Phe Phe Val Pro Arg Pro Thr Pro Ser Thr Pro 805 Arg Pro Thr Pro Gln Asp Trp Leu His Arg Arg Ala Gln Ile Leu 820 815 Glu Ile Leu Arg Arg Arg Pro Trp Ala Gly Arg Lys 830 <210> 318 <211> 23 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-23 <223> Synthetic construct. <400> 318 ccctgaagct gccagatggc tcc 23 <210> 319 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 319 ctgtgctctt cggtgcagcc agtc 24 <210> 320 <211> 43 <212> DNA <213> Artificial <220>

<221> Artificial Sequence

<223> Synthetic construct.

<222> 1-43

14 MARIE 11

- <400> 320 ccacagatgt ggtactgcct ggggcagtca gcttgcgcta cag 43
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- <211> 1197
- <212> DNA
- <213> Homo sapiens
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101 1011

<211> 317 <212> PRT <213> Homo sapiens

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Arg Gly Asn Arg Tyr Cys Arg Arg Val Cys Glu Pro Leu Leu Gly 285

Tyr Tyr Pro Tyr Pro Tyr Cys Tyr Gln Gly Gly Arg Val Ile Cys 300

Arg Val Ile Met Pro Cys Asn Trp Trp Val Ala Arg Met Leu Gly 315

Arg Val

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<213> Homo sapiens

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<211> 239

<212> PRT

<213> Homo sapiens

<400> 324

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Leu Gly Met Val Gly Thr Leu Ile Thr Thr Ile Leu Pro His Trp
20 25 30

Arg Arg Thr Ala His Val Gly Thr Asn Ile Leu Thr Ala Val Ser 35 40 45

Tyr Leu Lys Gly Leu Trp Met Glu Cys Val Trp His Ser Thr Gly 50 55 60

Ile Tyr Gln Cys Gln Ile Tyr Arg Ser Leu Leu Ala Leu Pro Gln 65 70 75

Asp Leu Gln Ala Ala Arg Ala Leu Met Val Ile Ser Cys Leu Leu 80 85 90

Ser Gly Ile Ala Cys Ala Cys Ala Val Ile Gly Met Lys Cys Thr $95 \hspace{1.5cm} 100 \hspace{1.5cm} 105$

Arg Cys Ala Lys Gly Thr Pro Ala Lys Thr Thr Phe Ala Ile Leu 110 115 120

Gly Gly Thr Leu Phe Ile Leu Ala Gly Leu Leu Cys Met Val Ala 125 130 135

Val Ser Trp Thr Thr Asn Asp Val Val Gln Asn Phe Tyr Asn Pro $140 \\ 145 \\ 150 \\ 145$

Leu Leu Pro Ser Gly Met Lys Phe Glu Ile Gly Gln Ala Leu Tyr 155 160 165

Leu Gly Phe Ile Ser Ser Ser Leu Ser Leu Ile Gly Gly Thr Leu 170 175 180

Leu Cys Leu Ser Cys Gln Asp Glu Ala Pro Tyr Arg Pro Tyr Gln
185 190 190

Ala Pro Pro Arg Ala Thr Thr Thr Thr Ala Asn Thr Ala Pro Ala 200 205 210

Tyr Gln Pro Pro Ala Ala Tyr Lys Asp Asn Arg Ala Pro Ser Val 215 220 225 Thr Ser Ala Thr His Ser Gly Tyr Arg Leu Asn Asp Tyr Val 230 235

- <210> 325
- <211> 2121
- <212> DNA
- <213> Homo sapiens
- <400> 325 gageteeeet caggagegeg ttagetteae acetteggea geaggaggge 50 ggcagcttct cgcaggcggc agggcgggcg gccaggatca tgtccaccac 100 cacatgccaa gtggtggcgt teeteetgte cateetgggg etggeegget 150 gcatcgcggc caccgggatg gacatgtgga gcacccagga cctgtacgac 200 aaccccgtca cctccgtgtt ccagtacgaa gggctctgga ggagctgcgt 250 gaggcagagt tcaggcttca ccgaatgcag gccctatttc accatcctgg 300 gacttccagc catgctgcag gcagtgcgag ccctgatgat cgtaggcatc 350 gteetgggtg ceattggeet eetggtatee atetttgeee tgaaatgeat 400 ccgcattggc agcatggagg actctgccaa agccaacatg acactgacct 450 ccgggatcat gttcattgtc tcaggtcttt gtgcaattgc tggagtgtct 500 gtgtttgcca acatgctggt gactaacttc tggatgtcca cagctaacat 550 gtacaccggc atgggtggga tggtgcagac tgttcagacc aggtacacat 600 ttggtgcggc tctgttcgtg ggctgggtcg ctggaggcct cacactaatt 650 gggggtgtga tgatgtgcat cgcctgccgg ggcctggcac cagaagaaac 700 caactacaaa gccgtttctt atcatgcctc aggccacagt gttgcctaca 750 agcctggagg cttcaaggcc agcactggct ttgggtccaa caccaaaaac 800 aagaagatat acgatggagg tgcccgcaca gaggacgagg tacaatctta 850 teetteeaag caegactatg tgtaatgete taagacetet cageaeggge 900 ggaagaaact cccggagagc tcacccaaaa aacaaggaga tcccatctag 950 atttcttctt gcttttgact cacagctgga agttagaaaa gcctcgattt 1000 catctttgga gaggccaaat ggtcttagcc tcagtctctg tctctaaata 1050 ttccaccata aaacagctga gttatttatg aattagaggc tatagctcac 1100 attttcaatc ctctatttct ttttttaaat ataactttct actctgatga 1150 gagaatgtgg ttttaatctc tctctcacat tttgatgatt tagacagact 1200 ccccctcttc ctcctagtca ataaacccat tgatgatcta tttcccagct 1250

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<211> 261

<212> PRT

<213> Homo sapiens

<400> 326

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Leu Gly Leu Ala Gly Cys Ile Ala Ala Thr Gly Met Asp Met Trp $20 \\ 25 \\ 30$

Ser Thr Gln Asp Leu Tyr Asp Asn Pro Val Thr Ser Val Phe Gln 35 40 45

Tyr Glu Gly Leu Trp Arg Ser Cys Val Arg Gln Ser Ser Gly Phe 50 55 60

Thr Glu Cys Arg Pro Tyr Phe Thr Ile Leu Gly Leu Pro Ala Met 65 70 75

Leu Gln Ala Val Arg Ala Leu Met Ile Val Gly Ile Val Leu Gly

80 85 90 Ala Ile Gly Leu Leu Val Ser Ile Phe Ala Leu Lys Cys Ile Arg Ile Gly Ser Met Glu Asp Ser Ala Lys Ala Asn Met Thr Leu Thr Ser Gly Ile Met Phe Ile Val Ser Gly Leu Cys Ala Ile Ala Gly Val Ser Val Phe Ala Asn Met Leu Val Thr Asn Phe Trp Met Ser 145 140 Thr Ala Asn Met Tyr Thr Gly Met Gly Gly Met Val Gln Thr Val 155 Gln Thr Arg Tyr Thr Phe Gly Ala Ala Leu Phe Val Gly Trp Val 170 175 Ala Gly Gly Leu Thr Leu Ile Gly Gly Val Met Met Cys Ile Ala 185 190 Cys Arg Gly Leu Ala Pro Glu Glu Thr Asn Tyr Lys Ala Val Ser 200 205 Tyr His Ala Ser Gly His Ser Val Ala Tyr Lys Pro Gly Gly Phe 215 Lys Ala Ser Thr Gly Phe Gly Ser Asn Thr Lys Asn Lys Lys Ile 230 235 Tyr Asp Gly Gly Ala Arg Thr Glu Asp Glu Val Gln Ser Tyr Pro 250 Ser Lys His Asp Tyr Val 260

<210> 327 <211> 2010

<212> DNA

<213> Homo sapiens

<400> 327

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<210> 328

<211> 225

<212> PRT

<213> Homo sapiens

<400> 328

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Val Gly Met Val Gly Thr Val Ala Val Thr Val Met Pro Gln Trp 20 25 30

Arg Val Ser Ala Phe Ile Glu Asn Asn Ile Val Val Phe Glu Asn 35 40 45

Phe Trp Glu Gly Leu Trp Met Asn Cys Val Arg Gln Ala Asn Ile 50 55 60

Arg Met Gln Cys Lys Ile Tyr Asp Ser Leu Leu Ala Leu Ser Pro
65 70 75

Asp Leu Gln Ala Ala Arg Gly Leu Met Cys Ala Ala Ser Val Met 80 85 90

Ser Phe Leu Ala Phe Met Met Ala Ile Leu Gly Met Lys Cys Thr 95 100 105

Arg Cys Thr Gly Asp Asn Glu Lys Val Lys Ala His Ile Leu Leu 110 115 120

Thr Ala Gly Ile Ile Phe Ile Ile Thr Gly Met Val Val Leu Ile 125 130 135

Pro Val Ser Trp Val Ala Asn Ala Ile Ile Arg Asp Phe Tyr Asn 140 145 150

Ser Ile Val Asn Val Ala Gln Lys Arg Glu Leu Gly Glu Ala Leu 155 160 165

Tyr Leu Gly Trp Thr Thr Ala Leu Val Leu Ile Val Gly Gly Ala 170 175 180

Leu Phe Cys Cys Val Phe Cys Cys Asn Glu Lys Ser Ser Ser Tyr 185 190 195

Arg Tyr Ser Ile Pro Ser His Arg Thr Thr Gln Lys Ser Tyr His 200 205 210

111

Thr Gly Lys Lys Ser Pro Ser Val Tyr Ser Arg Ser Gln Tyr Val 215 220 225

<210> 329

<211> 1315

<212> DNA

<213> Homo sapiens

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cagetatgta gacccccgcc cccaceteca acactgcace ettetgeeet 1250

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<210> 330

<211> 220

<212> PRT

<213> Homo sapiens

<400> 330

Met Ala Ser Ala Gly Met Gln Ile Leu Gly Val Val Leu Thr Leu 1 5 10 15

Leu Gly Trp Val Asn Gly Leu Val Ser Cys Ala Leu Pro Met Trp 20 25 30

Lys Val Thr Ala Phe Ile Gly Asn Ser Ile Val Val Ala Gln Val
35 40 45

Val Trp Glu Gly Leu Trp Met Ser Cys Val Val Gln Ser Thr Gly
50 55 60

Gln Met Gln Cys Lys Val Tyr Asp Ser Leu Leu Ala Leu Pro Gln 65 70 75

Asp Leu Gln Ala Ala Arg Ala Leu Cys Val Ile Ala Leu Leu Val

Ala Leu Phe Gly Leu Leu Val Tyr Leu Ala Gly Ala Lys Cys Thr 95 100 105

Thr Cys Val Glu Glu Lys Asp Ser Lys Ala Arg Leu Val Leu Thr 110 115 120

Ser Gly Ile Val Phe Val Ile Ser Gly Val Leu Thr Leu Ile Pro 125 130 135

Val Cys Trp Thr Ala His Ala Ile Ile Arg Asp Phe Tyr Asn Pro 140 145 150

Leu Val Ala Glu Ala Gln Lys Arg Glu Leu Gly Ala Ser Leu Tyr 155 160 165

Leu Gly Trp Ala Ala Ser Gly Leu Leu Leu Gly Gly Gly Leu 170 175 180

Leu Cys Cys Thr Cys Pro Ser Gly Gly Ser Gln Gly Pro Ser His
185 190 190

Tyr Met Ala Arg Tyr Ser Thr Ser Ala Pro Ala Ile Ser Arg Gly 200 205

Pro Ser Glu Tyr Pro Thr Lys Asn Tyr Val 215 220

<210> 331

<211> 1160

<212> DNA

<213> Homo sapiens

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gttccttggc atggtgggga ctcttgccac aaccettctg cctcagtggt 200
ggagtatcag cttttgttgg cagcaacatt attgtctttg agaggctctg 250
ggaaqqqctc tgqatqaatt gcatccgaca agccagggtc cggttgcaat 300
qcaaqttcta tagctccttq ttqqctctcc cgcctgccct ggaaacagcc 350
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cacttttcct tggctgggca agcgctgctg tcctcttcat tggagggggt 650
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tecagtgeet ggetacegtg tgecaeacac agataagega agaaatacga 750
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acattetgae tteaggtgta ttaaatgeat tgaetattgt tggaeceaat 1000
cgctgctcca attttcatat tctaaattca agtataccca taatcattag 1050
caagtgtaca atgatggact acttattact ttttgaccat catgtattat 1100
ctgataagaa tctaaagttg aaattgatat tctataacaa taaaacatat 1150
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Met Asn Cys Ile Arg Gln Ala Arg Val Arg Leu Gln Cys Lys Phe

<210> 332

<211> 173

<212> PRT

<213> Homo sapiens

<400> 332

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Ala	Leu	Met	Cys	Val 35	Ala	Val	Ala	Leu	Ser 40	Leu	Ile	Ala	Leu	Leu 45
Ile	Gly	Ile	Cys	Gly 50	Met	Lys	Gln	Val	Gln 55	Cys	Thr	Gly	Ser	Asn 60
Glu	Arg	Ala	Lys	Ala 65	Tyr	Leu	Leu	Gly	Thr 70	Ser	Gly	Val	Leu	Phe 75
Ile	Leu	Thr	Gly	Ile 80	Phe	Val	Leu	Ile	Pro 85	Val	Ser	Trp	Thr	Ala 90
Asn	Ile	Ile	Ile	Arg 95	Asp	Phe	Tyr	Asn	Pro 100	Ala	Ile	His	Ile	Gly 105
Gln	Lys	Arg	Glu	Leu 110	Gly	Ala	Ala	Leu	Phe 115	Leu	Gly	Trp	Ala	Ser 120
Ala	Ala	Val	Leu	Phe 125	Ile	Gly	Gly	Gly	Leu 130	Leu	Суз	Gly	Phe	Cys 135
Cys	Cys	Asn	Arg	Lys 140	Lys	Gln	Gly	Tyr	Arg 145	Tyr	Pro	Val	Pro	Gl ₂ 150
Tyr	Arg	Val	Pro	His 155	Thr	Asp	Lys	Arg	Arg 160	Asn	Thr	Thr	Met	Le:
Ser	Lys	Thr	Ser	Thr 170	Ser	Tyr	Val							
<210> 333														

<211> 535

<212> DNA

<213> Homo sapiens

<400> 333

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<210> 334

<211> 85

<212> PRT

<213> Homo sapiens

<400> 334

Met Lys Ile Thr Gly Gly Leu Leu Leu Leu Cys Thr Val Val Tyr
1 5 10 15

Phe Cys Ser Ser Ser Glu Ala Ala Ser Leu Ser Pro Lys Lys Val 20 25 30

Asp Cys Ser Ile Tyr Lys Lys Tyr Pro Val Val Ala Ile Pro Cys 35 40 45

Pro Ile Thr Tyr Leu Pro Val Cys Gly Ser Asp Tyr Ile Thr Tyr 50 55 60

Gly Asn Glu Cys His Leu Cys Thr Glu Ser Leu Lys Ser Asn Gly 65 70 75

Arg Val Gln Phe Leu His Asp Gly Ser Cys 80 85

<210> 335

<211> 742

<212> DNA

<213> Homo sapiens

<400> 335

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tttgctctat ttcagcagat cttttctacc tactttgtgt gatcaaaaaa 650 gaagagttaa aacaacacat gtaaatgcct tttgatattt catgggaatg 700 cctctcattt aaaaatagaa ataaagcatt ttgttaaaaa ga 742

<210> 336

<211> 148

<212> PRT

<213> Homo sapiens

<400> 336

Met Ala Ala Ser Pro Ala Arg Pro Ala Val Leu Ala Leu Thr Gly
1 5 10 15

Leu Ala Leu Leu Leu Leu Cys Trp Gly Pro Gly Gly Ile Ser 20 25 30

Gly Asn Lys Leu Lys Leu Met Leu Gln Lys Arg Glu Ala Pro Val 35 40 45

Pro Thr Lys Thr Lys Val Ala Val Asp Glu Asn Lys Ala Lys Glu . 50 $\,$ 55 $\,$ 60

Phe Leu Gly Ser Leu Lys Arg Gln Lys Arg Gln Leu Trp Asp Arg
65 70 75

Thr Arg Pro Glu Val Gln Gln Trp Tyr Gln Gln Phe Leu Tyr Met 80 85 90

Gly Phe Asp Glu Ala Lys Phe Glu Asp Asp Ile Thr Tyr Trp Leu 95 100 105

Asn Arg Asp Arg Asn Gly His Glu Tyr Tyr Gly Asp Tyr Tyr Gln 110 115

Arg His Tyr Asp Glu Asp Ser Ala Ile Gly Pro Arg Ser Pro Tyr 125 130 135

Gly Phe Arg His Gly Ala Ser Val Asn Tyr Asp Asp Tyr 140 145

<210> 337

<211> 1310

<212> DNA

<213> Homo sapiens

<400> 337

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ageegggege teggtagege ggegggeaag geaggegeea tgaeeetgat 100

tgaaggggtg ggtgatgagg tgaeegteet ttteteggtg ettgeetgee 150

ttetggtget ggeeettgee tgggteteaa egeacacege tgagggeggg 200

gaeecactge ceeageegte agggaeeeca aegeeateee ageecagege 250

490 () ()

10 (0.1

agccatggca gctaccgaca gcatgagagg ggaggcccca ggggcagaga 300 ccccagcct gagacacaga ggtcaagctg cacagccaga gcccagcacg 350 gggttcacag caacaccgcc agccccggac tccccgcagg agcccctcgt 400 gctacggctg aaattcctca atgattcaga gcaggtggcc agggcctggc 450 cccacqacac cattggctcc ttqaaaagga cccagtttcc cggccgggaa 500 cagcaggtgc gactcatcta ccaagggcag ctgctaggcg acgacaccca 550 gaccetggge ageetteace teceteecaa etgegttete eactgeeacg 600 tgtccacgag agtcggtccc ccaaatcccc cctgcccgcc ggggtccgag 650 cccggcccct ccgggctgga aatcggcagc ctgctgctgc ccctgctgct 700 cctgctgttg ctgctgctct ggtactgcca gatccagtac cggcccttct 750 ttcccctqac cgccactctg ggcctggccg gcttcaccct gctcctcagt 800 ctcctggcct ttgccatgta ccgcccgtag tgcctccgcg ggcgcttggc 850 ctgcctgccc aggcccgcct ctccggcctg cctcttcccg ctgccctgga 950 gcccagccct gcgccgcaga ggactcccgg gactggcgga ggccccgccc 1000 tgcgaccgcc ggggctcggg gccacctccc ggggctgctg aacctcagcc 1050 cgcactggga gtgggctcct cggggtcggg catctgctgt cgctgcctcg 1100 gccccgggca gagccgggcc gccccggggg cccgtcttag tgttctgccg 1150 gaggacccag ccgcctccaa tccctgacag ctccttgggc tgagttgggg 1200 acgccaggtc ggtgggaggc tggtgaaggg gagcggggag gggcagagga 1250 gttccccgga acccgtgcag attaaagtaa ctgtgaagtt ttaaaaaaaa 1300 aaaaaaaaa 1310

<210> 338

<211> 246

<212> PRT

<213> Homo sapiens

<400> 338

Met Thr Leu Ile Glu Gly Val Gly Asp Glu Val Thr Val Leu Phe 1 5 10 15

Thr His Thr Ala Glu Gly Gly Asp Pro Leu Pro Gln Pro Ser Gly 35 40 45

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Thr Pro Thr Pro Ser Gln Pro Ser Ala Ala Met Ala Ala Thr Asp
Ser Met Arg Gly Glu Ala Pro Gly Ala Glu Thr Pro Ser Leu Arg
                65
His Arg Gly Gln Ala Ala Gln Pro Glu Pro Ser Thr Gly Phe Thr
Ala Thr Pro Pro Ala Pro Asp Ser Pro Gln Glu Pro Leu Val Leu
                                  100
                95
Arg Leu Lys Phe Leu Asn Asp Ser Glu Gln Val Ala Arg Ala Trp
                                  115
               110
Pro His Asp Thr Ile Gly Ser Leu Lys Arg Thr Gln Phe Pro Gly
                                  130
               125
Arg Glu Gln Gln Val Arg Leu Ile Tyr Gln Gly Gln Leu Leu Gly
                                  145
Asp Asp Thr Gln Thr Leu Gly Ser Leu His Leu Pro Pro Asn Cys
                                  160
Val Leu His Cys His Val Ser Thr Arg Val Gly Pro Pro Asn Pro
                                  175
Pro Cys Pro Pro Gly Ser Glu Pro Gly Pro Ser Gly Leu Glu Ile
                                  190
               185
205
                200
Trp Tyr Cys Gln Ile Gln Tyr Arg Pro Phe Phe Pro Leu Thr Ala
                                  220
                215
Thr Leu Gly Leu Ala Gly Phe Thr Leu Leu Leu Ser Leu Leu Ala
                230
Phe Ala Met Tyr Arg Pro
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<210> 339

<211> 849

<212> DNA

<213> Homo sapiens

<400> 339
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tgccctctcc agattcccca ggctctcaga gaagatcagc agaaagtctg 100
caagacccta agaaccatca gccctcagct gcacctcctc ccctccaagg 150
atgacaaagg cgctactcat ctatttggtc agcagctttc ttgccctaaa 200
tcaggccagc ctcatcagtc gctgtgactt ggcccaggtg ctgcagctgg 250

1 |1

aggacttga tgggtttgag ggttactcc tgagtgactg gctgtgcctg 300 gcttttgtgg aaagcaagtt caacatatca aagataaatg aaaatgcgga 350 tggaagcttt gactatggcc tcttccagat caacagccac tactggtgca 400 acgattataa gagttactcg gaaaaccttt gccacgtaga ctgtcaagat 450 ctgctgaatc ccaaccttct tgcaggcatc cactgcgcaa aaaggattgt 500 gtccggagca cgggggatga acaactgggt agaatggagg ttgcactgtt 550 caggccggcc actctcctac tggctgacag gatgccgcct gagatgaaac 600 agggtgcggg tgcaccgtgg agtcattcca agactcctgt cctcactcag 650 ggattcttca ttcttctc ctactgcctc cacttcatgt tatttcttc 700 ccttcccatt tacaactaaa actgaccaga gccccaggaa taaatggttt 750 tcttggcttc ctccttactc ccactatgac ccagtccct ggttcctgtc 800 tgttatttgt aaactgagga ccacaataaa gaaatcttta tattatcg 849

<210> 340

<211> 148

<212> PRT

<213> Homo sapiens

<400> 340

Met Thr Lys Ala Leu Leu Ile Tyr Leu Val Ser Ser Phe Leu Ala 1 5 10 15

Leu Asn Gln Ala Ser Leu Ile Ser Arg Cys Asp Leu Ala Gln Val 20 25 30

Leu Gln Leu Glu Asp Leu Asp Gly Phe Glu Gly Tyr Ser Leu Ser 35 40 45

Asp Trp Leu Cys Leu Ala Phe Val Glu Ser Lys Phe Asn Ile Ser 50 55

Lys Ile Asn Glu Asn Ala Asp Gly Ser Phe Asp Tyr Gly Leu Phe 65 70 75

Gln Ile Asn Ser His Tyr Trp Cys Asn Asp Tyr Lys Ser Tyr Ser 80 85

Glu Asn Leu Cys His Val Asp Cys Gln Asp Leu Leu Asn Pro Asn 95 100 105

Leu Leu Ala Gly Ile His Cys Ala Lys Arg Ile Val Ser Gly Ala 110 115 120

Arg Gly Met Asn Asn Trp Val Glu Trp Arg Leu His Cys Ser Gly 125 130 130

Arg Pro Leu Ser Tyr Trp Leu Thr Gly Cys Arg Leu Arg

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<210> 341
<211> 23
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<220>
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<222> 1-23
<223> Synthetic construct.
<400> 341
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<210> 342
<211> 29
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-29
<223> Synthetic construct.
<400> 342
 ggtcagcagc tttcttgccc taaatcagg 29
<210> 343
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 343
 atctcaggcg gcatcctgtc agcc 24
<210> 344
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 344
 gtggatgcct gcaagaaggt tggg 24
<210> 345
<211> 45
<212> DNA
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<213> Artificial

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<220>
<221> Artificial Sequence
<222> 1-45
<223> Synthetic construct.

<400> 345
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<210> 346
<211> 2575
<212> DNA
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<213> Homo sapiens

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<210> 347

<211> 639

<212> PRT

<213> Homo sapiens

<400> 347

Met Leu Arg Lys Arg Tyr Arg His Arg Pro Cys Arg Leu Gln
1 5 10 15

Phe Leu Leu Leu Leu Met Leu Gly Cys Val Leu Met Met Val 20 25 30

Ala Met Leu His Pro Pro His His Thr Leu His Gln Thr Val Thr
35 40 45

Ala Gln Ala Ser Lys His Ser Pro Glu Ala Arg Tyr Arg Leu Asp
50
55
60

Phe Gly Glu Ser Gln Asp Trp Val Leu Glu Ala Glu Asp Glu Gly 65 70 75

Glu Glu Tyr Ser Pro Leu Glu Gly Leu Pro Pro Phe Ile Ser Leu 80 85 90

Arg Glu Asp Gln Leu Leu Val Ala Val Ala Leu Pro Gln Ala Arg 95 100 105

Arg Asn Gln Ser Gln Gly Arg Arg Gly Gly Ser Tyr Arg Leu Ile 110 115 120

Lys Gln Pro Arg Arg Gln Asp Lys Glu Ala Pro Lys Arg Asp Trp 125 130 130

Gly Ala Asp Glu Asp Gly Glu Val Ser Glu Glu Glu Glu Leu Thr

Pro Phe Ser Leu Asp Pro Arg Gly Leu Gln Glu Ala Leu Ser Ala 155 160 165

Arg Ile Pro Leu Gln Arg Ala Leu Pro Glu Val Arg His Pro Leu 170 175 180

Cys Leu Gln Gln His Pro Gln Asp Ser Leu Pro Thr Ala Ser Val 185 190 195

Ile Leu Cys Phe His Asp Glu Ala Trp Ser Thr Leu Leu Arg Thr 200 205 210

Val His Ser Ile Leu Asp Thr Val Pro Arg Ala Phe Leu Lys Glu 215 220 225

Ile Ile Leu Val Asp Asp Leu Ser Gln Gln Gly Gln Leu Lys Ser 230 235

Ala Leu Ser Glu Tyr Val Ala Arg Leu Glu Gly Val Lys Leu Leu 245 250 255

Arg	Ser	Asn	Lys	Arg 260	Leu	Gly	Ala	Ile	Arg 265	Ala	Arg	Met	Leu	Gly 270
Ala	Thr	Arg	Ala	Thr 275	Gly	Asp	Val	Leu	Val 280	Phe	Met	Asp	Ala	His 285
Cys	Glu	Cys	His	Pro 290	Gly	Trp	Leu	Glu	Pro 295	Leu	Leu	Ser	Arg	Ile 300
Ala	Gly	Asp	Arg	Ser 305	Arg	Val	Val	Ser	Pro 310	Val	Ile	Asp	Val	Ile 315
Asp	Trp	Lys	Thr	Phe 320	Gln	Tyr	Tyr	Pro	Ser 325	Lys	Asp	Leu	Gln	Arg 330
Gly	Val	Leu	Asp	Trp 335	Lys	Leu	Asp	Phe	His 340	Trp	Glu	Pro	Leu	Pro 345
Glu	His	Val	Arg	Lys 350	Ala	Leu	Gln	Ser	Pro 355	Ile	Ser	Pro	Ile	Arg 360
Ser	Pro	Val	Val	Pro 365	Gly	Glu	Val	Val	Ala 370	Met	Asp	Arg	His	Tyr 375
Phe	Gln	Asn	Thr	Gly 380	Ala	Tyr	Asp	Ser	Leu 385	Met	Ser	Leu	Arg	Gly 390
Gly	Glu	Asn	Leu	Glu 395	Leu	Ser	Phe	Lys	Ala 400	Trp	Leu	Cys	Gly	Gly 405
Ser	Val	Glu	Ile	Leu 410	Pro	Cys	Ser	Arg	Val 415	Gly	His	Ile	Tyr	Gln 420
Asn	Gln	Asp	Ser	His 425	Ser	Pro	Leu	Asp	Gln 430	Glu	Ala	Thr	Leu	Arg 435
Asn	Arg	Val	Arg	Ile 440	Ala	Glu	Thr	Trp	Leu 445	Gly	Ser	Phe	Lys	Glu 450
Thr	Phe	Tyr	Lys	His 455		Pro	Glu	Ala	Phe 460	Ser	Leu	Ser	Lys	Ala 465
Glu	Lys	Pro	Asp	Cys 470	Met	Glu	Arg	Leu	Gln 475	Leu	Gln	Arg	Arg	Leu 480
Gly	Cys	Arg	Thr	Phe 485		Trp	Phe	Leu	Ala 490	Asn	Val	Tyr	Pro	Glu 495
Leu	Tyr	Pro	Ser	Glu 500		Arg	Pro	Ser	Phe 505	Ser	Gly	Lys	Leu	His 510
Asn	Thr	Gly	Leu	Gly 515		Cys	Ala	Asp	Cys 520	Gln	. Ala	Glu	Gly	Asp 525
Ile	Leu	Gly	, Cys	Pro 530		: Val	. Leu	Ala	Pro 535	Суз	Ser	Asp	Ser	Arg 540
Gln	Gln	Glr	ı Tyr	Leu	Glr	n His	Thr	Ser	Arg	Lys	Glu	ı Ile	His	Phe

555 550 545 Gly Ser Pro Gln His Leu Cys Phe Ala Val Arg Gln Glu Gln Val 565 Ile Leu Gln Asn Cys Thr Glu Glu Gly Leu Ala Ile His Gln Gln 580 575 His Trp Asp Phe Gln Glu Asn Gly Met Ile Val His Ile Leu Ser 595 590 Gly Lys Cys Met Glu Ala Val Val Gln Glu Asn Asn Lys Asp Leu 610 605 Tyr Leu Arg Pro Cys Asp Gly Lys Ala Arg Gln Gln Trp Arg Phe Asp Gln Ile Asn Ala Val Asp Glu Arg <210> 348 <211> 23 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-23 <223> Synthetic construct. <400> 348 ggagaggtgg tggccatgga cag 23 <210> 349 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 349 ctgtcactgc aaggagccaa cacc 24 <210> 350 <211> 45 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-45 <223> Synthetic construct. <400> 350

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<210> 351 <211> 2524 <212> DNA

<213> Homo sapiens

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<210> 352

<211> 243

<212> PRT

<213> Homo sapiens

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Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala
Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg
Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala
Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro
Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys
Gly Glu Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn
                                    100
Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu
                                    115
Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asn Ser
                125
                                    130
Ala Leu Arg Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg
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Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe Asn Gly Ala Glu
                155
Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Gln
                                                        180
                170
Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser
                185
Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp
                                                         210
                200
Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp
Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu
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Leu Pro Lys

<210> 353

<211> 480

<212> DNA

<213> Homo sapiens

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tecggggtte tggccette ggtgctcaca gacgatgtte cacaggagee 150 cgtgcccacg ctgtggaacg agccggccga gctgccgtcg ggagaaggce 200 ccgtggagag caccagccce ggccgggage ccgtggacae cggtccccac 250 gcccccaccg tcgcgcagg acccgaggae agcaccgcge aggagcggct 300 ggaccaggge ggcgggtcge tggggcccgg cgctatcgcg gccatcgtga 350 tcgccgcct gctggcacc tgcgtggtge tggcgctcgt ggtcgtcge ggtcgtcge 400 ctgagaaagt tttctgccte ctgaagcgaa taaaggggce gcgcccggce 450 gcggcgcgac tcggcaaaaa aaaaaaaaa 480

<210> 354

<211> 121

<212> PRT

<213> Homo sapiens

<400> 354

Met Ala Ser Cys Leu Ala Leu Arg Met Ala Leu Leu Leu Val Ser

Gly Val Leu Ala Pro Ala Val Leu Thr Asp Asp Val Pro Gln Glu 20 25 30

Pro Val Pro Thr Leu Trp Asn Glu Pro Ala Glu Leu Pro Ser Gly 35 40 45

Glu Gly Pro Val Glu Ser Thr Ser Pro Gly Arg Glu Pro Val Asp 50 55 60

Thr Gly Pro Pro Ala Pro Thr Val Ala Pro Gly Pro Glu Asp Ser 65 70 75

Gly Ala Ile Ala Ala Ile Val Ile Ala Ala Leu Leu Ala Thr Cys 95 100 105

Val Val Leu Ala Leu Val Val Val Ala Leu Arg Lys Phe Ser Ala 110 115 120

Ser

<210> 355

<211> 2134

<212> DNA

<213> Homo sapiens

<400> 355

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gtgcctgacg gcggcgctgg cccacggctg tctgcactgc cacagcaact 150 tctccaagaa gttctccttc taccgccacc atgtgaactt caagtcctgg 200 tgggtgggcg acateceegt gteaggggcg etgeteaeeg actggagega 250 cgacacgatg aaggagctgc acctggccat ccccgccaag atcacccggg 300 agaagctgga ccaagtggcg acagcagtgt accagatgat ggatcagctg 350 taccagggga agatgtactt ccccgggtat ttccccaacg agctgcgaaa 400 catcttccgg gagcaggtgc acctcatcca gaacgccatc atcgaaaggc 450 acctggcacc aggcagctgg ggaggaggc agctctccag ggagggaccc 500 agectageae etgaaggate aatgecatea eecegegggg aeeteeeeta 550 agtagccccc agaggcgctg ggagtgttgc caccgccctc ccctgaagtt 600 tgctccatct cacgctgggg gtcaacctgg ggaccccttc cctccgggcc 650 atggacacac atacatgaaa accaggeege ategaetgte ageaeegetg 700 tggcatcttc cagtacgaga ccatctcctg caacaactgc acagactcgc 750 acgtcgcctg ctttggctat aactgcgagt agggctcagg catcacaccc 800 accegtgeea gggeeetact gteeetgggg teeeaggete teettggagg 850 gggctccccg ccttccacct ggctgtcatc gggtagggcg gggccgtggg 900 ttcaggggcg caccacttcc aagcctgtgt cccacaggtc ctcggcgcag 950 tggaagtcag ctgtccaggg cctcctgaac tacataaata actggcacaa 1000 gtaagtcccc tcctcaaacc aacacaggca gtgtgtgtat gtgagcacct 1050 cgtgggtgag tatgtgtggg gcacaggctg gctccctcag ctcccacgtc 1100 ctagaggggc tcccgaggag gtggaacctc aacccagctc tgcgcaggag 1150 geggetgeag teettttete eetcaaaggt etcegaeeet eagetggagg 1200 cgggcatctt tcctaaaggg tccccatagg gtctggttcc accccatccc 1250 aggtctgtgg tcagagcctg ggagggttcc ctacgatggt taggggtgcc 1300 ccatggaggg gctgactgcc ccacattgcc tttcagacag gacacgagca 1350 tgaggtaagg ccgccctgac ctggacttca gggggagggg gtaaagggag 1400 agaggaggg ggctaggggg tcctctagat cagtgggggc actgcaggtg 1450 gggctctccc tatacctggg acacctgctg gatgtcacct ctgcaaccac 1500 acccatgtgg tggtttcatg aacagaccac gctcctctgc cttctcctgg 1550 cetgggacae acagagecae eceggeettg tgagtgacee agagaaggga 1600 ggeeteggga gaaggggtge tegtaageea acaceagegt geegggeet 1650 geacaceett eggacateee aggeaegagg gtgtegtgga tgtgggeeaea 1700 cataggacea caegteecag etgggaggag aggeetgggg eceecaggga 1750 gggaggeagg gggtgggga catggagage tgaggeagee tegteteee 1800 geageetggt ategeeagee ttaaggtgte tggageeeee tegteteee 1850 aacetgacet tggaagatge tgetgagtgt eteaageage acatggaege 1900 getgggeetg eceecaggga aegtggggg ggagaeteag etggaeagee 1950 ectgeetgte actetggage tgggetggtg etgeeteagg aceecetete 2000 egaeecegga eagagetgag etggeeagg ecaggaggg ggagggagg 2050 gaatggggt gggetgteg eageateage geetgggeag gteegeagag 2100 etgeeggatg tgattaaagt ecetgatgt tete 2134

<210> 356

<211> 157

<212> PRT

<213> Homo sapiens

<400> 356

Met Ala Leu Leu Cys Leu Val Cys Leu Thr Ala Ala Leu Ala 1 5 10 15

His Gly Cys Leu His Cys His Ser Asn Phe Ser Lys Lys Phe Ser 20 25 30

Phe Tyr Arg His His Val Asn Phe Lys Ser Trp Trp Val Gly Asp 35 40 45

Ile Pro Val Ser Gly Ala Leu Leu Thr Asp Trp Ser Asp Asp Thr 50 55 60

Met Lys Glu Leu His Leu Ala Ile Pro Ala Lys Ile Thr Arg Glu 65 70 75

Lys Leu Asp Gln Val Ala Thr Ala Val Tyr Gln Met Met Asp Gln 80 85 90

Leu Tyr Gln Gly Lys Met Tyr Phe Pro Gly Tyr Phe Pro Asn Glu 95 100 105

Leu Arg Asn Ile Phe Arg Glu Gln Val His Leu Ile Gln Asn Ala 110 115 120

Ile Ile Glu Arg His Leu Ala Pro Gly Ser Trp Gly Gly Gln 125 130 130

Leu Ser Arg Glu Gly Pro Ser Leu Ala Pro Glu Gly Ser Met Pro

Ser Pro Arg Gly Asp Leu Pro 155

<210> 357 <211> 1536

<212> DNA

<213> Homo sapiens

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tcaaggettt aagagaetea etgtgatgee tetatgaaag agaggeatte 1200

ctagagaaag attgttccaa tttgtcattt aatatcaagt ttgtatactg 1250 cacatgactt acacacaaca tagttcctgc tcttttaagg ttacctaagg 1300 gttgaaactc taccttcttt cataagcaca tgtccgtctc tgactcagga 1350 tcaaaaacca aaggatggtt ttaaacacct ttgtgaaatt gtctttttgc 1400 cagaagttaa aggctgtctc caagtccctg aactcagcag aaatagacca 1450 tgtgaaaact ccatgcttgg ttagcatctc caactcccta tgtaaatcaa 1500 caacctgcat aataaataaa aggcaatcat gttata 1536

<210> 358

<211> 273

<212> PRT

<213> Homo sapiens

<400> 358

Met Glu Ala Ala Pro Ser Arg Phe Met Phe Leu Leu Phe Leu Leu 1 5 10 15

Thr Cys Glu Leu Ala Ala Glu Val Ala Ala Glu Val Glu Lys Ser $20 \\ 25 \\ 30$

Ser Asp Gly Pro Gly Ala Ala Gln Glu Pro Thr Trp Leu Thr Asp 35 40 45

Val Pro Ala Ala Met Glu Phe Ile Ala Ala Thr Glu Val Ala Val 50 55 60

Ile Gly Phe Phe Gln Asp Leu Glu Ile Pro Ala Val Pro Ile Leu 65 70 75

His Ser Met Val Gln Lys Phe Pro Gly Val Ser Phe Gly Ile Ser 80 85 90

Thr Asp Ser Glu Val Leu Thr His Tyr Asn Ile Thr Gly Asn Thr 95 100 105

Ile Cys Leu Phe Arg Leu Val Asp Asn Glu Gln Leu Asn Leu Glu 110 115 120

Asp Glu Asp Ile Glu Ser Ile Asp Ala Thr Lys Leu Ser Arg Phe 125 130 135

Ile Glu Ile Asn Ser Leu His Met Val Thr Glu Tyr Asn Pro Val

Thr Val Ile Gly Leu Phe Asn Ser Val Ile Gln Ile His Leu Leu 155 160 165

Leu Ile Met Asn Lys Ala Ser Pro Glu Tyr Glu Glu Asn Met His 170 175 180

Arg Tyr Gln Lys Ala Ala Lys Leu Phe Gln Gly Lys Ile Leu Phe 185 190 195

<210> 362

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Ile Leu Val Asp Ser Gly Met Lys Glu Asn Gly Lys Val Ile Ser
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 Phe Phe Lys Leu Lys Glu Ser Gln Leu Pro Ala Leu Ala Ile Tyr
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 Gln Thr Leu Asp Asp Glu Trp Asp Thr Leu Pro Thr Ala Glu Val
 Ser Val Glu His Val Gln Asn Phe Cys Asp Gly Phe Leu Ser Gly
Lys Leu Leu Lys Glu Asn Arg Glu Ser Glu Gly Lys Thr Pro Lys
Val Glu Leu
<210> 359
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 359
ccagcagtgc ccatactcca tagc 24
<210> 360
<211> 20
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<400> 360
tgacgagtgg gatacactgc 20
<210> 361
<211> 24
<212> DNA
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<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 361
 gctctacgga aacttctgct gtgg 24
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<211> 50
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<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-50
<223> Synthetic construct.
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<210> 363
<211> 1777
<212> DNA
<213> Homo sapiens
<400> 363
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 cctcagcggg gacccgggct cagggacgcg gcggcggcgg cggcgactgc 150
 agtggctgga cgatggcagc gtccgccgga gccggggcgg tgattgcagc 200
 cccaqacagc cggcgctggc tgtggtcggt gctggcggcg gcgcttgggc 250
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 ttcgtggcaa atggtacaca agggaagctg acctgcaagt tcaagtctac 350
 tagtacgact ggcgggttga cctcagtctc ctggagcttc cagccagagg 400
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 tgacaagaaa gatgcatcaa tcaacataga aaatatgcag tttatacaca 550
 atggcaccta tatctgtgat gtcaaaaacc ctcctgacat cgttgtccag 600
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tgcggatatc cgaaagaatt aagagaatac ctagaacata tcctcagcaa 1000

gaaacaaaac caaactggac tctcgtgcag aaaatgtagc ccattaccac 1050 atgtagcctt ggagacccag gcaaggacaa gtacacgtgt actcacagag 1100 ggagagaaag atgtgtacaa aggatatgta taaatattct atttagtcat 1150 cctgatatga ggagccagtg ttgcatgatg aaaagatggt atgattctac 1200 atatgtaccc attgtcttgc tgtttttgta ctttcttttc aggtcattta 1250 caattgggag atttcagaaa cattcctttc accatcattt agaaatggtt 1300 tgccttaatg gagacaatag cagatcctgt agtatttcca gtagacatgg 1350 ccttttaatc taagggctta agactgatta gtcttagcat ttactgtagt 1400 tggaggatgg agatgctatg atggaagcat acccagggtg gcctttagca 1450 cagtatcagt accatttatt tgtctgccgc ttttaaaaaa tacccattgg 1500 ctatgccact tgaaaacaat ttgagaagtt tttttgaagt ttttctcact 1550 aaaatatggg gcaattgtta gccttacatg ttgtgtagac ttactttaag 1600 tttgcaccct tgaaatgtgt catatcaatt tctggattca taatagcaag 1650 attagcaaag gataaatgcc gaaggtcact tcattctgga cacagttgga 1700 tcaatactga ttaagtagaa aatccaagct ttgcttgaga acttttgtaa 1750 cgtggagagt aaaaagtatc ggtttta 1777

<210> 364 <211> 269 <212> PRT

<213> Homo sapiens

<400> 364

Met Ala Ala Ser Ala Gly Ala Gly Ala Val Ile Ala Ala Pro Asp 1 5 10

Ser Arg Arg Trp Leu Trp Ser Val Leu Ala Ala Ala Leu Gly Leu 20 25 30

Leu Thr Ala Gly Val Ser Ala Leu Glu Val Tyr Thr Pro Lys Glu

Ile Phe Val Ala Asn Gly Thr Gln Gly Lys Leu Thr Cys Lys Phe 50 55 60

Lys Ser Thr Ser Thr Gly Gly Leu Thr Ser Val Ser Trp Ser
65 70 75

Phe Gln Pro Glu Gly Ala Asp Thr Thr Val Ser Phe Phe His Tyr 80 85 90

Ser Gln Gly Gln Val Tyr Leu Gly Asn Tyr Pro Pro Phe Lys Asp 95 100 105

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Arg Ile Ser Trp Ala Gly Asp Leu Asp Lys Lys Asp Ala Ser Ile
Asn Ile Glu Asn Met Gln Phe Ile His Asn Gly Thr Tyr Ile Cys
                                                         135
                                     130
                125
Asp Val Lys Asn Pro Pro Asp Ile Val Val Gln Pro Gly His Ile
Arg Leu Tyr Val Val Glu Lys Glu Asn Leu Pro Val Phe Pro Val
                                                         165
Trp Val Val Val Gly Ile Val Thr Ala Val Val Leu Gly Leu Thr
                                     175
                170
Leu Leu Ile Ser Met Ile Leu Ala Val Leu Tyr Arg Arg Lys Asn
                185
Ser Lys Arg Asp Tyr Thr Gly Cys Ser Thr Ser Glu Ser Leu Ser
                200
Pro Val Lys Gln Ala Pro Arg Lys Ser Pro Ser Asp Thr Glu Gly
                215
Leu Val Lys Ser Leu Pro Ser Gly Ser His Gln Gly Pro Val Ile
                 230
Tyr Ala Gln Leu Asp His Ser Gly Gly His His Ser Asp Lys Ile
                 245
Asn Lys Ser Glu Ser Val Val Tyr Ala Asp Ile Arg Lys Asn
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<210> 365

<211> 1321

<212> DNA

<213> Homo sapiens

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ccatcagcgc gccgggctgc cgcctctcgg ccacggctgg gtcgggggcc 150

tcgggctggg gctggggctg gcgctcgggg tgaagctggc aggtgggctg 200

aggggcgcgg ccccggcga gtcccccgac ctgaggcgtc 250

gcctctggcc gagccgcac aggagcagtc cctcgcccg tggtctccgc 300

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111

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<210> 366

<211> 373

<212> PRT

<213> Homo sapiens

<400> 366

Met Tyr Arg Leu Leu Ser Ala Val Thr Ala Arg Ala Ala Pro 1 5 10 15

Gly Gly Leu Ala Ser Ser Cys Gly Arg Arg Gly Val His Gln Arg
20 25 30

Ala Gly Leu Pro Pro Leu Gly His Gly Trp Val Gly Gly Leu Gly 35 40 45

Leu Gly Leu Gly Leu Ala Leu Gly Val Lys Leu Ala Gly Gly Leu 50 55 60

Arg Gly Ala Ala Pro Ala Gln Ser Pro Ala Ala Pro Asp Pro Glu 65 70 75

Ala Ser Pro Leu Ala Glu Pro Pro Gln Glu Gln Ser Leu Ala Pro 80 85 90 Trp Ser Pro Gln Thr Pro Ala Pro Pro Cys Ser Arg Cys Phe Ala Arg Ala Ile Glu Ser Ser Arg Asp Leu Leu His Arg Ile Lys Asp 115 Glu Val Gly Ala Pro Gly Ile Val Val Gly Val Ser Val Asp Gly Lys Glu Val Trp Ser Glu Gly Leu Gly Tyr Ala Asp Val Glu Asn Arg Val Pro Cys Lys Pro Glu Thr Val Met Arg Ile Ala Ser Ile 160 Ser Lys Ser Leu Thr Met Val Ala Leu Ala Lys Leu Trp Glu Ala 175 Gly Lys Leu Asp Leu Asp Ile Pro Val Gln His Tyr Val Pro Glu Phe Pro Glu Lys Glu Tyr Glu Gly Glu Lys Val Ser Val Thr Thr Arg Leu Leu Ile Ser His Leu Ser Gly Ile Arg His Tyr Glu Lys 215 Asp Ile Lys Lys Val Lys Glu Glu Lys Ala Tyr Lys Ala Leu Lys 230 Met Met Lys Glu Asn Val Ala Phe Glu Gln Glu Lys Glu Gly Lys 250 245 Ser Asn Glu Lys Asn Asp Phe Thr Lys Phe Lys Thr Glu Gln Glu 265 260 Asn Glu Ala Lys Cys Arg Asn Ser Lys Pro Gly Lys Lys Lys Asn 275 Asp Phe Glu Gln Gly Glu Leu Tyr Leu Arg Glu Lys Phe Glu Asn 290 Ser Ile Glu Ser Leu Arg Leu Phe Lys Asn Asp Pro Leu Phe Phe 310 305 Lys Pro Gly Ser Gln Phe Leu Tyr Ser Thr Phe Gly Tyr Thr Leu 325 Leu Ala Ala Ile Val Glu Arg Ala Ser Gly Cys Lys Tyr Leu Asp 335 Tyr Met Gln Lys Ile Phe His Asp Leu Asp Met Leu Thr Thr Val 355 350 Gln Glu Glu Asn Glu Pro Val Ile Tyr Asn Arg Ala Arg 365

<210> 367

```
ude had hen bed her bed not the man the heat with
```

```
<211> 30
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-30
<223> Synthetic construct.
<400> 367
 tggaaaagaa gtctggtcag aaggtttagg 30
<210> 368
<211> 25
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-25
<223> Synthetic construct.
<400> 368
 catttggctt cattctcctg ctctg 25
<210> 369
<211> 28
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-28
<223> Synthetic construct.
<400> 369
 aaaacctcag aacaactcat tttgcacc 28
<210> 370
<211> 41
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-41
<223> Synthetic construct.
<400> 370
 gtctcaccat ggttgctctt gccaaattgt gggaagcagg g 41
<210> 371
<211> 1150
<212> DNA
<213> Homo sapiens
<400> 371
 gtgacactat agaagagcta tgacgtcgca tgcacgcgta cgtaagctcg 50
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gaattegget egaggetggt gggaagaage egagatggeg geageeageg 100
ctggggcaac ccggctgctc ctgctcttgc tgatggcggt agcagcgccc 150
agtcgagccc ggggcagcgg ctgccgggcc gggactggtg cgcgaggggc 200
tggggcggaa ggtcgagagg gcgaggcctg tggcacggtg gggctgctgc 250
tggagcactc atttgagatc gatgacagtg ccaacttccg gaagcggggc 300
tcactgctct ggaaccagca ggatggtacc ttgtccctgt cacagcggca 350
gctcagcgag gaggagcggg gccgactccg ggatgtggca gccctgaatg 400
gcctgtaccg ggtccggatc ccaaggcgac ccggggccct ggatggcctg 450
gaagetggtg getatgtete eteetttgte eetgegtget eeetggtgga 500
gtcgcacctg tcggaccagc tgaccctgca cgtggatgtg gccggcaacg 550
tggtgggcgt gtcggtggtg acgcaccccg ggggctgccg gggccatgag 600
gtggaggacg tggacctgga gctgttcaac acctcggtgc agctgcagcc 650
gcccaccaca gccccaggcc ctgagacggc ggccttcatt gagcgcctgg 700
agatggaaca ggcccagaag gccaagaacc cccaggagca gaagtccttc 750
ttcgccaaat actggatgta catcattccc gtcgtcctgt tcctcatgat 800
gtcaggagcg ccagacaccg ggggccaggg tgggggtggg ggtgggggtg 850
gtggtggggg tagtggcctt tgctgtgtgc caccctccct gtaagtctat 900
ttaaaaaacat cgacgataca ttgaaatgtg tgaacgtttt gaaaagctac 950
agettecage agecaaaage aactgttgtt ttggcaagae ggteetgatg 1000
tacaagettg attgaaatte actgeteact tgataegtta tteagaaace 1050
caaggaatgg ctgtccccat cctcatgtgg ctgtgtggag ctcagctgtg 1100
ttgtgtggca gtttattaaa ctgtccccca gatcgacacg caaaaaaaaa 1150
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<210> 372

<211> 269

<212> PRT

<213> Homo sapiens

<400> 372

Met Ala Ala Ser Ala Gly Ala Thr Arg Leu Leu Leu Leu 1 5 10 15

Leu Met Ala Val Ala Ala Pro Ser Arg Ala Arg Gly Ser Gly Cys
20 25 30

Arg Ala Gly Thr Gly Ala Arg Gly Ala Gly Ala Glu Gly Arg Glu 35 40 45

```
Gly Glu Ala Cys Gly Thr Val Gly Leu Leu Leu Glu His Ser Phe
Glu Ile Asp Asp Ser Ala Asn Phe Arg Lys Arg Gly Ser Leu Leu
                                     70
Trp Asn Gln Gln Asp Gly Thr Leu Ser Leu Ser Gln Arg Gln Leu
Ser Glu Glu Glu Arg Gly Arg Leu Arg Asp Val Ala Ala Leu Asn
Gly Leu Tyr Arg Val Arg Ile Pro Arg Arg Pro Gly Ala Leu Asp
Gly Leu Glu Ala Gly Gly Tyr Val Ser Ser Phe Val Pro Ala Cys
                                    130
Ser Leu Val Glu Ser His Leu Ser Asp Gln Leu Thr Leu His Val
Asp Val Ala Gly Asn Val Val Gly Val Ser Val Val Thr His Pro
                155
Gly Gly Cys Arg Gly His Glu Val Glu Asp Val Asp Leu Glu Leu
                170
Phe Asn Thr Ser Val Gln Leu Gln Pro Pro Thr Thr Ala Pro Gly
                185
Pro Glu Thr Ala Ala Phe Ile Glu Arg Leu Glu Met Glu Gln Ala
                200
Gln Lys Ala Lys Asn Pro Gln Glu Gln Lys Ser Phe Phe Ala Lys
                215
Tyr Trp Met Tyr Ile Ile Pro Val Val Leu Phe Leu Met Met Ser
                230
Gly Ala Pro Asp Thr Gly Gly Gln Gly Gly Gly Gly Gly Gly
                245
Gly Gly Gly Ser Gly Leu Cys Cys Val Pro Pro Ser Leu
                260
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<210> 373

<211> 1706

<212> DNA

<213> Homo sapiens

<400> 373

ggagegetge tggaacecga geeggageeg gagecacage ggggagggtg 50
gcetggegge etggageegg aegtgteegg ggegteeceg eagacegggg 100
cageaggteg teegggggee eaceatgetg gtgaetgeet aeettgettt 150
tgtaggeete etggeeteet geetgggget ggaactgtea agatgeeggg 200

ctaaaccccc tggaagggcc tgcagcaatc cctccttcct tcggtttcaa 250 ctggacttct atcaggtcta cttcctggcc ctggcagctg attggcttca 300 ggccccctac ctctataaac tctaccagca ttactacttc ctggaaggtc 350 aaattgccat cctctatgtc tgtggccttg cctctacagt cctctttggc 400 ctagtggcct cctcccttgt ggattggctg ggtcgcaaga attcttgtgt 450 cctcttctcc ctgacttact cactatgctg cttaaccaaa ctctctcaag 500 actactttgt gctgctagtg gggcgagcac ttggtgggct gtccacagcc 550 ctgctcttct cagccttcga ggcctggtat atccatgagc acgtggaacg 600 gcatgacttc cctgctgagt ggatcccagc tacctttgct cgagctgcct 650 tctggaacca tgtgctggct gtagtggcag gtgtggcagc tgaggctgta 700 gccagctgga tagggctggg gcctgtagcg ccctttgtgg ctgccatccc 750 tctcctggct ctggcagggg ccttggccct tcgaaactgg ggggagaact 800 atgaccggca gcgtgccttc tcaaggacct gtgctggagg cctgcgctgc 850 ctcctgtcgg accgccgcgt gctgctgctg ggcaccatac aagctctatt 900 tgagagtgtc atcttcatct ttgtcttcct ctggacacct gtgctggacc 950 cacacggggc ccctctgggc attatettet ccagetteat ggcagecage 1000 ctgcttggct cttccctgta ccgtatcgcc acctccaaga ggtaccacct 1050 tcagcccatg cacctgctgt cccttgctgt gctcatcgtc gtcttctctc 1100 tottcatgtt gactttctct accagcccag gccaggagag tccggtggag 1150 tccttcatag cctttctact tattgagttg gcttgtggat tatactttcc 1200 cagcatgage ttectaegga gaaaggtgat eeetgagaca gageaggetg 1250 gtgtactcaa ctggttccgg gtacctctgc actcactggc ttgcctaggg 1300 ctccttgtcc tccatgacag tgatcgaaaa acaggcactc ggaatatgtt 1350 cagcatttgc tctgctgtca tggtgatggc tctgctggca gtggtgggac 1400 tetteacegt ggtaaggeat gatgetgage tgegggtace tteacetact 1450 gaggagecet atgeceetga getgtaacee caeteeagga caagataget 1500 gggacagact cttgaattcc agctatccgg gattgtacag atctctctgt 1550 gactgacttt gtgactgtcc tgtggtttct cctgccattg ctttgtgttt 1600 gggaggacat gatgggggtg atggactgga aagaaggtgc caaaagttcc 1650

ctctgtgtta ctcccattta gaaaataaac acttttaaat gatcaaaaaa 1700 aaaaaa 1706

<210> 374

<211> 450

<212> PRT

<213> Homo sapiens

<400> 374

Met Leu Val Thr Ala Tyr Leu Ala Phe Val Gly Leu Leu Ala Ser 1 5 10 15

Cys Leu Gly Leu Glu Leu Ser Arg Cys Arg Ala Lys Pro Pro Gly 20 25 30

Arg Ala Cys Ser Asn Pro Ser Phe Leu Arg Phe Gln Leu Asp Phe 35 40 45

Tyr Gln Val Tyr Phe Leu Ala Leu Ala Ala Asp Trp Leu Gln Ala 50 55 60

Pro Tyr Leu Tyr Lys Leu Tyr Gln His Tyr Tyr Phe Leu Glu Gly
65 70 75

Gln Ile Ala Ile Leu Tyr Val Cys Gly Leu Ala Ser Thr Val Leu 80 85 90

Phe Gly Leu Val Ala Ser Ser Leu Val Asp Trp Leu Gly Arg Lys 95 100 105

Asn Ser Cys Val Leu Phe Ser Leu Thr Tyr Ser Leu Cys Cys Leu 110 115 120

Thr Lys Leu Ser Gln Asp Tyr Phe Val Leu Leu Val Gly Arg Ala 125 130 135

Leu Gly Gly Leu Ser Thr Ala Leu Leu Phe Ser Ala Phe Glu Ala 140 145 150

Trp Tyr Ile His Glu His Val Glu Arg His Asp Phe Pro Ala Glu 155 160 165

Trp Ile Pro Ala Thr Phe Ala Arg Ala Ala Phe Trp Asn His Val 170 175 180

Leu Ala Val Val Ala Gly Val Ala Ala Glu Ala Val Ala Ser Trp 185 190 195

Ile Gly Leu Gly Pro Val Ala Pro Phe Val Ala Ala Ile Pro Leu 200 205 210

Leu Ala Leu Ala Gly Ala Leu Ala Leu Arg Asn Trp Gly Glu Asn 215 220 225

Tyr Asp Arg Gln Arg Ala Phe Ser Arg Thr Cys Ala Gly Gly Leu 230 235 240 Arg Cys Leu Leu Ser Asp Arg Arg Val Leu Leu Gly Thr Ile Gln Ala Leu Phe Glu Ser Val Ile Phe Ile Phe Val Phe Leu Trp 270 265 260 Thr Pro Val Leu Asp Pro His Gly Ala Pro Leu Gly Ile Ile Phe Ser Ser Phe Met Ala Ala Ser Leu Leu Gly Ser Ser Leu Tyr Arg 290 Ile Ala Thr Ser Lys Arg Tyr His Leu Gln Pro Met His Leu Leu Ser Leu Ala Val Leu Ile Val Val Phe Ser Leu Phe Met Leu Thr 320 Phe Ser Thr Ser Pro Gly Gln Glu Ser Pro Val Glu Ser Phe Ile 335 Ala Phe Leu Leu Ile Glu Leu Ala Cys Gly Leu Tyr Phe Pro Ser 350 Met Ser Phe Leu Arg Arg Lys Val Ile Pro Glu Thr Glu Gln Ala 365 Gly Val Leu Asn Trp Phe Arg Val Pro Leu His Ser Leu Ala Cys 380 Leu Gly Leu Leu Val Leu His Asp Ser Asp Arg Lys Thr Gly Thr 395 Arg Asn Met Phe Ser Ile Cys Ser Ala Val Met Val Met Ala Leu 410 Leu Ala Val Val Gly Leu Phe Thr Val Val Arg His Asp Ala Glu 430 425 Leu Arg Val Pro Ser Pro Thr Glu Glu Pro Tyr Ala Pro Glu Leu 440

<210> 375

<211> 1098

<212> DNA

<213> Artificial

<400> 375
 gcgacgcgcg gcggggcggc gagaggaaac gcggcgccgg gccgggcccg 50
 gccctggaga tggtccccgg cgccgcgggc tggtgttgtc tcgtgctctg 100
 gctccccgcg tgcgtcgcgg cccacggctt ccgtatccat gattatttgt 150
 actttcaagt gctgagtcct ggggacattc gatacatctt cacagccaca 200
 cctgccaagg actttggtgg tatctttcac acaaggtatg agcagattca 250

ccttgtcccc gctgaacctc cagaggcctg cggggaactc agcaacggtt 300 tetteateca ggaccagatt getetggtgg agagggggg etgeteette 350 ctctccaaga ctcgggtggt ccaggagcac ggcgggcggg cggtgatcat 400 ctctgacaac gcagttgaca atgacagctt ctacgtggag atgatccagg 450 acagtaccca gcgcacagct gacatccccg ccctcttcct gctcggccga 500 qacqqctaca tqatccqccq ctctctqgaa cagcatgggc tgccatgggc 550 catcatttcc atcccagtca atgtcaccag catccccacc tttgagctgc 600 tgcaaccgcc ctggaccttc tggtagaaga gtttgtccca cattccagcc 650 ataagtgact ctgagctggg aaggggaaac ccaggaattt tgctacttgg 700 aatttqqaqa taqcatctqq qqacaaqtqq agccaggtag aggaaaaggg 750 cccagggccc ccaagggtgt ctcatgctac aagaagaggc aagagacagg 850 ccccagggct tctggctaga acccgaaaca aaaggagctg aaggcaggtg 900 gcctgagage catctgtgac ctgtcacact cacctggete cagecteece 950 tacccagggt ctctgcacag tgaccttcac agcagttgtt ggagtggttt 1000 aaagagctgg tgtttgggga ctcaataaac cctcactgac tttttagcaa 1050 taaagcttct catcagggtt gcaaaaaaaa aaaaaaaaa aaaaaaaa 1098

<210> 376

<211> 188

<212> PRT

<213> Homo sapiens

<400> 376

Met Val Pro Gly Ala Ala Gly Trp Cys Cys Leu Val Leu Trp Leu 1 5 10 15

Pro Ala Cys Val Ala Ala His Gly Phe Arg Ile His Asp Tyr Leu 20 25 30

Tyr Phe Gln Val Leu Ser Pro Gly Asp Ile Arg Tyr Ile Phe Thr

Ala Thr Pro Ala Lys Asp Phe Gly Gly Ile Phe His Thr Arg Tyr
50 55 60

Glu Gln Ile His Leu Val Pro Ala Glu Pro Pro Glu Ala Cys Gly
65 70 75

Glu Leu Ser Asn Gly Phe Phe Ile Gln Asp Gln Ile Ala Leu Val

```
Glu His Gly Gly Cys Ser Phe Leu Ser Lys Thr Arg Val Val Gln 105

Glu His Gly Gly Arg Ala Val Ile Ile Ser Asp Asn Ala Val Asp 120

Asn Asp Ser Phe Tyr Val Glu Met Ile Gln Asp Ser Thr Gln Arg 135

Thr Ala Asp Ile Pro Ala Leu Phe Leu Leu Gly Arg Asp Gly Tyr 150

Met Ile Arg Arg Ser Leu Glu Gln His Gly Leu Pro Trp Ala Ile 165

Ile Ser Ile Pro Val Asn Val Thr Ser Ile Pro Thr Phe Glu Leu 180
```

Leu Gln Pro Pro Trp Thr Phe Trp 185

<210> 377 <211> 496 <212> DNA

<213> Artificial

<220>

<221> unsure

<222> 396

<223> unknown base

<400> 377

<210> 378

<211> 116

<212> PRT

<213> Homo sapiens

<400> 378

```
Met Glu Leu Ala Leu Leu Cys Gly Leu Val Val Met Ala Gly Val
 Ile Pro Ile Gln Gly Gly Ile Leu Asn Leu Asn Lys Met Val Lys
 Gln Val Thr Gly Lys Met Pro Ile Leu Ser Tyr Trp Pro Tyr Gly
 Cys His Cys Gly Leu Gly Gly Arg Gly Gln Pro Lys Asp Ala Thr
 Asp Trp Cys Cys Gln Thr His Asp Cys Cys Tyr Asp His Leu Lys
 Thr Gln Gly Cys Gly Ile Tyr Lys Asp Asn Asn Lys Ser Ser Ile
 His Cys Met Asp Leu Ser Gln Arg Tyr Cys Leu Met Ala Val Phe
 Asn Val Ile Tyr Leu Glu Asn Glu Asp Ser Glu
                 110
<210> 379
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 379
ctgcctccac tgctctgtgc tggg 24
<210> 380
<211> 24
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-24
<223> Synthetic construct.
<400> 380
cagagcagtg gatgttcccc tggg 24
<210> 381
<211> 45
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-45
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<223> Synthetic construct.

<400> 381 ctgaacaaga tggtcaagca agtgactggg aaaatgccca tcctc 45

<210> 382

<211> 764

<212> DNA

<213> Homo sapiens

<400> 382
ctcgcttctt ccttctggat gggggcccag ggggcccagg agagtataaa 50
ggcgatgtgg agggtgcccg gcacaaccag acgcccagtc acaggcgaga 100
gccctgggat gcaccggcca gaggccatgc tgctgctgct cacgcttgcc 150
ctcctggggg gccccacctg ggcagggaag atgtatggcc ctggaggagg 200
caagtattc agcaccactg aagactacga ccatgaaatc acagggctgc 250
gggtgtctgt aggtcttctc ctggtgaaaa gtgtccaggt gaaacttgga 300

gactcctggg acgtgaaact gggagcctta ggtgggaata cccaggaagt 350

caccetgeag ceaggegaat acateacaaa agtetttgte geetteeaag 400

ctttcctccg gggtatggtc atgtacacca gcaaggaccg ctatttctat 450

tttgggaage ttgatggeca gateteetet geetaeeeea geeaagaggg 500

gcaggtgctg gtgggcatct atggccagta tcaactcctt ggcatcaaga 550

gcattggctt tgaatggaat tatccactag aggagccgac cactgagcca 600

ccagttaatc tcacatactc agcaaactca cccgtgggtc gctagggtgg 650

ggtatggggc catccgagct gaggccatct gtgtggtggt ggctgatggt 700

actggagtaa ctgagtcggg acgctgaatc tgaatccacc aataaataaa 750

gcttctgcag aaaa 764

<210> 383

<211> 178

<212> PRT

<213> Homo sapiens

<400> 383

Met His Arg Pro Glu Ala Met Leu Leu Leu Leu Thr Leu Ala Leu
1 5 10 15

Leu Gly Gly Pro Thr Trp Ala Gly Lys Met Tyr Gly Pro Gly Gly 20 25 30

Gly Lys Tyr Phe Ser Thr Thr Glu Asp Tyr Asp His Glu Ile Thr 35 40 45

```
Gly Leu Arg Val Ser Val Gly Leu Leu Leu Val Lys Ser Val Gln G60

Val Lys Leu Gly Asp Ser Trp Asp Val Lys Leu Gly Ala Leu Gly 75

Gly Asn Thr Gln Glu Val Thr Leu Gln Pro Gly Glu Tyr Ile Thr 90

Lys Val Phe Val Ala Pro Gln Ala Phe Gln Ala Phe Leu Arg Gly Met Val Met 105

Tyr Thr Ser Lys Asp Arg Tyr Phe Tyr Phe Gly Lys Leu Asp Gly 120

Gln Ile Ser Ser Ala Tyr Pro Ser Gln Glu Gly Gln Val Leu Val 135

Gly Ile Tyr Asn Tyr Pro Leu Glu Glu Pro Thr Thr Glu Pro 165

Val Asn Leu Thr Tyr Ser Ala Asn Ser Pro Val Gly Arg
```

<210> 384

<211> 2379

<212> DNA

<213> Homo sapiens

<400> 384
gctgagcgtg tgcgcggtac ggggctctcc tgccttctgg gctccaacgc 50
agctctgtgg ctgaactggg tgctcatcac gggaactgct gggctatgga 100
atacagatgt ggcagctcag gtagccccaa attgcctgga agaatacatc 150
atgttttcg ataagaagaa attgtaggat ccagttttt ttttaaccgc 200
cccctcccca cccccaaaa aaactgtaaa gatgcaaaaa cgtaatatcc 250
atgaagatcc tattacctag gaagattttg atgtttgct gcgaatgcgg 300
tgttgggatt tatttgttct tggagtgtc tgcgtggctg gcaaagaata 350
atgttccaaa atcggtccat ctcccaaggg gtccaatttt tcttcctggg 400
tgtcagcgag ccctgactca ctacagtgca gctgacaggg gctgtcatgc 450
aactggcccc taagccaaag caaaagacct aaggacgacc tttgaacaat 500
acaaaggatg ggtttcaatg taattaggct actgagcgga tcagctgtag 550
cactggttat agccccact gtcttactga caatgctttc ttctgccgaa 600
cgaggatgcc ctaagggctg taggtgtaa ggcaaaatgg tatattgtga 650

atotoagaaa ttacaggaga taccotoaag tatatotgot ggttgottag 700 gtttgtccct tcgctataac agccttcaaa aacttaagta taatcaattt 750 aaagggctca accagetcae etggetatae ettgaceata accatateag 800 caatattgac gaaaatgctt ttaatggaat acgcagactc aaagagctga 850 ttcttagttc caatagaatc tcctattttc ttaacaatac cttcagacct 900 gtgacaaatt tacggaactt ggatctgtcc tataatcagc tgcattctct 950 gggatctgaa cagtttcggg gcttgcggaa gctgctgagt ttacatttac 1000 ggtctaactc cctgagaacc atccctgtgc gaatattcca agactgccgc 1050 aacctggaac ttttggacct gggatataac cggatccgaa gtttagccag 1100 gaatgtcttt gctggcatga tcagactcaa agaacttcac ctggagcaca 1150 atcaattttc caagetcaac ctggcccttt ttccaaggtt ggtcagcctt 1200 cagaaccttt acttgcagtg gaataaaatc agtgtcatag gacagaccat 1250 gtcctggacc tggagctcct tacaaaggct tgatttatca ggcaatgaga 1300 togaagettt cagtggacce agtgttttcc agtgtgtccc gaatetgcag 1350 cgcctcaacc tggattccaa caagctcaca tttattggtc aagagatttt 1400 ggattcttgg atatccctca atgacatcag tcttgctggg aatatatggg 1450 aatgcagcag aaatatttgc tcccttgtaa actggctgaa aagttttaaa 1500 ggtctaaggg agaatacaat tatctgtgcc agtcccaaag agctgcaagg 1550 agtaaatgtg atcgatgcag tgaagaacta cagcatctgt ggcaaaagta 1600 ctacagagag gtttgatctg gccagggctc tcccaaagcc gacgtttaag 1650 cccaagctcc ccaggccgaa gcatgagagc aaaccccctt tgcccccgac 1700 ggtgggagec acagageceg geceagagae egatgetgae geegageaea 1750 tctctttcca taaaatcatc gcgggcagcg tggcgctttt cctgtccgtg 1800 ctcgtcatcc tgctggttat ctacgtgtca tggaagcggt accctgcgag 1850 catgaagcag ctgcagcagc gctccctcat gcgaaggcac aggaaaaaga 1900 aaagacagtc cctaaagcaa atgactccca gcacccagga attttatgta 1950 gattataaac ccaccaacac ggagaccagc gagatgctgc tgaatgggac 2000 gggaccctgc acctataaca aatcgggctc cagggagtgt gaggtatgaa 2050 ccattgtgat aaaaagagct cttaaaagct gggaaataag tggtgcttta 2100

ttgaactctg gtgactatca agggaacgcg atgcccccc tccccttccc 2150
tctccctctc actttggtgg caagatcctt ccttgtccgt tttagtgcat 2200
tcataatact ggtcattttc ctctcataca taatcaaccc attgaaattt 2250
aaataccaca atcaatgtga agcttgaact ccggtttaat ataataccta 2300
ttgtataaga ccctttactg attccattaa tgtcgcattt gttttaagat 2350
aaaacttctt tcataggtaa aaaaaaaaa 2379

<210> 385

<211> 513

<212> PRT

<213> Homo sapiens

<400> 385

Met Gly Phe Asn Val Ile Arg Leu Leu Ser Gly Ser Ala Val Ala 1 5 10 15

Leu Val Ile Ala Pro Thr Val Leu Leu Thr Met Leu Ser Ser Ala 20 25 30

Glu Arg Gly Cys Pro Lys Gly Cys Arg Cys Glu Gly Lys Met Val 35 40 45

Tyr Cys Glu Ser Gln Lys Leu Gln Glu Ile Pro Ser Ser Ile Ser 50 55

Ala Gly Cys Leu Gly Leu Ser Leu Arg Tyr Asn Ser Leu Gln Lys 65 70 75

Leu Lys Tyr Asn Gln Phe Lys Gly Leu Asn Gln Leu Thr Trp Leu 80 85 90

Tyr Leu Asp His Asn His Ile Ser Asn Ile Asp Glu Asn Ala Phe 95 100 105

Asn Gly Ile Arg Arg Leu Lys Glu Leu Ile Leu Ser Ser Asn Arg 110 115 120

Ile Ser Tyr Phe Leu Asn Asn Thr Phe Arg Pro Val Thr Asn Leu 125 130 135

Arg Asn Leu Asp Leu Ser Tyr Asn Gln Leu His Ser Leu Gly Ser 140 145 150

Glu Gln Phe Arg Gly Leu Arg Lys Leu Leu Ser Leu His Leu Arg 155 160 165

Ser Asn Ser Leu Arg Thr Ile Pro Val Arg Ile Phe Gln Asp Cys 170 175 180

Arg Asn Leu Glu Leu Leu Asp Leu Gly Tyr Asn Arg Ile Arg Ser 185 190 195

Leu Ala Arg Asn Val Phe Ala Gly Met Ile Arg Leu Lys Glu Leu

				200					205					210
His	Leu	Glu	His	Asn 215	Gln	Phe	Ser	Lys	Leu 220	Asn	Leu	Ala	Leu	Phe 225
Pro	Arg	Leu	Val	Ser 230	Leu	Gln	Asn	Leu	Tyr 235	Leu	Gln	Trp	Asn	Lys 240
Ile	Ser	Val	Ile	Gly 245	Gln	Thr	Met	Ser	Trp 250	Thr	Trp	Ser	Ser	Leu 255
Gln	Arg	Leu	Asp	Leu 260	Ser	Gly	Asn	Glu	Ile 265	Glu	Ala	Phe	Ser	Gly 270
Pro	Ser	Val	Phe	Gln 275	Cys	Val	Pro	Asn	Leu 280	Gln	Arg	Leu	Asn	Leu 285
Asp	Ser	Asn	Lys	Leu 290	Thr	Phe	Ile	Gly	Gln 295	Glu	Ile	Leu	Asp	Ser 300
Trp	Ile	Ser	Leu	Asn 305	Asp	Ile	Ser	Leu	Ala 310	Gly	Asn	Ile	Trp	Glu 315
Cys	Ser	Arg	Asn	Ile 320	Cys	Ser	Leu	Val	Asn 325	Trp	Leu	Lys	Ser	Phe 330
Lys	Gly	Leu	Arg	Glu 335	Asn	Thr	Ile	Ile	Cys 340	Ala	Ser	Pro	Lys	Glu 345
Leu	Gln	Gly	Val	Asn 350	Val	Ile	Asp	Ala	Val 355	Lys	Asn	Tyr	Ser	Ile 360
Cys	Gly	Lys	Ser	Thr 365	Thr	Glu	Arg	Phe	Asp 370	Leu	Ala	Arg	Ala	Leu 375
Pro	Lys	Pro	Thr	Phe 380	Lys	Pro	Lys	Leu	Pro 385	Arg	Pro	Lys	His	Glu 390
Ser	Lys	Pro	Pro	Leu 395	Pro	Pro	Thr	Val	Gly 400	Ala	Thr	Glu	Pro	Gly 405
Pro	Glu	Thr	Asp	Ala 410	Asp	Ala	Glu	His	Ile 415	Ser	Phe	His	Lys	Ile 420
Ile	Ala	Gly	Ser	Val 425	Ala	Leu	Phe	Leu	Ser 430	Val	Leu	Val	Ile	Leu 435
Leu	Val	Ile	Tyr	Val 440	Ser	Trp	Lys	Arg	Tyr 445	Pro	Ala	Ser	Met	Lys 450
Gln	Leu	Gln	Gln	Arg 455	Ser	Leu	Met	Arg	Arg 460	His	Arg	Lys	Lys	Lys 465
Arg	Gln	Ser	Leu	Lys 470	Gln	Met	Thr	Pro	Ser 475	Thr	Gln	Glu	Phe	Tyr 480
Val	Asp	Tyr	Lys	Pro 485	Thr	Asn	Thr	Glu	Thr 490	Ser	Glu	Met	Leu	Leu 495

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Cys Glu Val
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<222> 1-24
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<210> 387
<211> 24
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<222> 1-24
<223> Synthetic construct.
<400> 387
ggtccccagg acatggtctg tccc 24
<210> 388
<211> 48
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<221> Artificial Sequence
<222> 1-48
<223> Synthetic construct.
<400> 388
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<210> 389
<211> 1449
<212> DNA
<213> Homo sapiens
<400> 389
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 ttgactgtcc tttaaatatg tcaagatcca gacttttcag tgtcacctca 100
 gcgatctcaa cgatagggat cttgtgtttg ccgctattcc agttggtgct 150
 ctcggaccta ccatgcgaag aagatgaaat gtgtgtaaat tataatgacc 200
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Asn Gly Thr Gly Pro Cys Thr Tyr Asn Lys Ser Gly Ser Arg Glu

505

aacaccctaa tggctggtat atctggatcc tcctgctgct ggttttggtg 250 gcagctcttc tctgtggagc tgtggtcctc tgcctccagt gctggctgag 300 gagaccccga attgattctc acaggcgcac catggcagtt tttgctgttg 350 gagacttgga ctctatttat gggacagaag cagctgtgag tccaactgtt 400 ggaattcacc ttcaaactca aacccctgac ctatatcctg ttcctgctcc 450 atgttttggc cctttaggct ccccacctcc atatgaagaa attgtaaaaa 500 caacctgatt ttaggtgtgg attatcaatt taaagtatta acgacatctg 550 taattccaaa acatcaaatt taggaatagt tatttcagtt gttggaaatg 600 tccagagatc tattcatata gtctgaggaa ggacaattcg acaaaagaat 650 ggatgttgga aaaaattttg gtcatggaga tgtttaaata gtaaagtagc 700 aggettttga tgtgtcactg ctgtatcata cttttatgct acacaaccaa 750 attaatgctt ctccactagt atccaaacag gcaacaatta ggtgctggaa 800 gtagtttcca tcacatttag gactccactg cagtatacag cacaccattt 850 tctgctttaa actctttcct agcatggggt ccataaaaat tattataatt 900 taacaatagc ccaagccgag aatccaacat gtccagaacc agaaccagaa 950 agatagtatt tgaatgaagg tgaggggaga gagtaggaaa aagaaaagtt 1000 tggagttgaa gggtaaagga taaatgaaga ggaaaaggaa aagattacaa 1050 gtctcagcaa aaacaagagg ttttatgccc caacctgaag aggaagaaat 1100 tgtagataga aggtgaagga gattgctgaa gatatagagc acatataatg 1150 ccaacacggg gagaaaagaa aatttcccct tttacagtaa tgaatgtggc 1200 ctccatagtc catagtgttt ctctggagcc tcagggcttg gcatttattg 1250 cagcatcatg ctaagaacct tcggcatagg tatctgttcc catgaggact 1300 gcagaagtag caatgagaca tottcaagtg gcattttggc agtggccatc 1350 agcaggggga cagacaaaaa catccatcac agatgacata tgatcttcag 1400 ctgacaaatt tgttgaacaa aacaataaac atcaatagat atctaaaaa 1449

<210> 390

<211> 146

<212> PRT

<213> Homo sapiens

<400> 390

Met Ser Arg Ser Arg Leu Phe Ser Val Thr Ser Ala Ile Ser Thr
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Leu Pro Cys Glu Glu Asp Glu Met Cys Val Asn Tyr Asn Asp Gln
His Pro Asn Gly Trp Tyr Ile Trp Ile Leu Leu Leu Val Leu
Val Ala Ala Leu Leu Cys Gly Ala Val Val Leu Cys Leu Gln Cys
Trp Leu Arg Arg Pro Arg Ile Asp Ser His Arg Arg Thr Met Ala
Val Phe Ala Val Gly Asp Leu Asp Ser Ile Tyr Gly Thr Glu Ala
Ala Val Ser Pro Thr Val Gly Ile His Leu Gln Thr Gln Thr Pro
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Asp Leu Tyr Pro Val Pro Ala Pro Cys Phe Gly Pro Leu Gly Ser
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                 125
 Pro Pro Pro Tyr Glu Glu Ile Val Lys Thr Thr
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<210> 391
<211> 26
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<222> 1-26
<223> Synthetic construct.
<400> 391
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<210> 392
<211> 23
<212> DNA
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<222> 1-23
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<400> 392
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<212> DNA
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 aagctccgtg gcggcggcga ccgtgacgag aagcccacgg ccagctcagt 200
 tctcttctac tttgggagag agagaaagtc agatgcccct tttaaactcc 250
 ctcttcaaaa ctcatctcct gggtgactga gttaatagag tggatacaac 300
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 gtctgtttgt ttgcttcttc agaaatgttt tttacaatct caagaaaaaa 450
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 cagtaaccac aaataaaaga acgaatgtct cgggcagtat cagatagcag 850
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 agaaaagctt tataattgct ggcttaggac agagcaatac tttacaataa 950
 aagctctaca cattttcaag gagtatgctg gattcatgga actctaattc 1000
 tgtacataaa aattttaaag ttatttgttt gctttcaggc aagtctgttc 1050
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aatgctgtac tatgtcctta aagagaattt ggtaacttgg ttgatgtggt 1100

aagcagatag gtgagttttg tataaatctt ttgtgtttga gatcaagctg 1150 aaatgaaaac actgaaaaac atggattcat ttctataaca catttattta 1200 agtatataac acgttttttg gacaagtgaa gaatgtttaa tcattctgtc 1250 atttgttctc aatagatgta actgttagac tacggctatt tgaaaaaatg 1300 tgcttattgt actatatttt gttattccaa ttatgagcag agaaaggaaa 1350 tataatgttg aaaataatgt tttgaaatca tgacccaaag aatgtattga 1400 tttgcactat ccttcagaat aactgaaggt taattattgt atatttttaa 1450 aaattacact tataagagta taatcttgaa atgggtagca gccactgtcc 1500 attacctatc gtaaacattg gggcaattta ataacagcat taaaatagtt 1550 gtaaactcta atcttatact tattgaagaa taaaagatat ttttatgatg 1600 agagtaacaa taaagtattc atgatttttc acatacatga atgttcattt 1650 aaaagtttaa tootttgagt gtotatgota toaggaaago acattattto 1700 catatttggg ttaattttgc ttttattata ttggtctagg aggaagggac 1750 tttggagaat ggaactcttg aggactttag ccaggtgtat ataataaagg 1800 taagagtatc ctttatgaaa ttttgaattt gtataacaga tgcattagat 1900 attcatttta tataatggcc acttaaaata agaacattta aaatataaac 1950 tatgaagatt gactatcttt tcaggaaaaa agctgtatat agcacaggga 2000 accctaatct tgggtaattc tagtataaaa caaattatac ttttatttaa 2050 atttcccttg tagcaaatct aattgccaca tggtgcccta tatttcatag 2100 tatttattct ctatagtaac tgcttaagtg cagctagctt ctagatttag 2150 actatataga atttagatat tgtattgttc gtcattataa tatgctacca 2200 catgtagcaa taattacaat attttattaa aataaatatg tgaaatattg 2250 acctttatgt gaagaaatta attatatgcc attgccaggt 2340

<210> 395

<211> 140

<212> PRT

<213> Homo sapiens

<400> 395

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20 25 30
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His Tyr Thr Phe Gln Gln Pro Arg His Gln Ser Ser Val Lys Leu
35 40 45

Arg Glu Gln Ile Leu Asp Leu Ser Lys Arg Tyr Val Lys Ala Leu 50 55 60

Ala Glu Glu Asn Lys Asn Thr Val Asp Val Glu Asn Gly Ala Ser $65 \hspace{1.5cm} 70 \hspace{1.5cm} 75$

Met Ala Gly Tyr Ala Asp Leu Lys Arg Thr Ile Ala Val Leu Leu 80 85 90

Asp Asp Ile Leu Gln Arg Leu Val Lys Leu Glu Asn Lys Val Asp 95 100 105

Tyr Ile Val Val Asn Gly Ser Ala Ala Asn Thr Thr Asn Gly Thr 110 115 120

Ser Gly Asn Leu Val Pro Val Thr Thr Asn Lys Arg Thr Asn Val 125 130 135

Ser Gly Ser Ile Arg 140

<210> 396

<211> 2639

<212> DNA

<213> Homo sapiens

<400> 396

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<212> PRT

<213> Homo sapiens

<400> 397

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Thr Thr Arg Pro Cys Phe Pro Gly Cys Gln Cys Glu Val Glu Thr 20 25 30

Phe Gly Leu Phe Asp Ser Phe Ser Leu Thr Arg Val Asp Cys Ser

Gly Leu Gly Pro His Ile Met Pro Val Pro Ile Pro Leu Asp Thr 50 55 60

Ala His Leu Asp Leu Ser Ser Asn Arg Leu Glu Met Val Asn Glu
65 70 75

Ser Val Leu Ala Gly Pro Gly Tyr Thr Thr Leu Ala Gly Leu Asp 80 85 90

Leu Ser His Asn Leu Leu Thr Ser Ile Ser Pro Thr Ala Phe Ser 95 100 105

Arg Leu Arg Tyr Leu Glu Ser Leu Asp Leu Ser His Asn Gly Leu
110 115 120

Thr Ala Leu Pro Ala Glu Ser Phe Thr Ser Ser Pro Leu Ser Asp 125 130 135

Val Asn Leu Ser His Asn Gln Leu Arg Glu Val Ser Val Ser Ala 140 145 150

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His Asn Leu Ile His Arg Leu Val Pro His Pro Thr Arg Ala Gly
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Leu Pro Ala Pro Thr Ile Gln Ser Leu Asn Leu Ala Trp Asn Arg
                                     190
                185
Leu His Ala Val Pro Asn Leu Arg Asp Leu Pro Leu Arg Tyr Leu
                                     205
Ser Leu Asp Gly Asn Pro Leu Ala Val Ile Gly Pro Gly Ala Phe
Ala Gly Leu Gly Gly Leu Thr His Leu Ser Leu Ala Ser Leu Gln
                                     235
Arg Leu Pro Glu Leu Ala Pro Ser Gly Phe Arg Glu Leu Pro Gly
                245
Leu Gln Val Leu Asp Leu Ser Gly Asn Pro Lys Leu Asn Trp Ala
                260
Gly Ala Glu Val Phe Ser Gly Leu Ser Ser Leu Gln Glu Leu Asp
                 275
Leu Ser Gly Thr Asn Leu Val Pro Leu Pro Glu Ala Leu Leu
                                     295
                 290
His Leu Pro Ala Leu Gln Ser Val Ser Val Gly Gln Asp Val Arg
                 305
Cys Arg Arg Leu Val Arg Glu Gly Thr Tyr Pro Arg Arg Pro Gly
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Ser Ser Pro Lys Val Pro Leu His Cys Val Asp Thr Arg Glu Ser
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Ala Ala Arg Gly Pro Thr Ile Leu
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<213> Artificial
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<222> 1-23
<223> Synthetic construct.
<400> 398
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<222> 1-23
<223> Synthetic construct.
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<222> 1-44
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<400> 400
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<211> 1571
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<213> Homo sapiens
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 gaggctatat gcgtcaattc cccaaaacaa gttttgacat ttcccctgaa 150
 atgtcattct ctatctattc actgcaagtg cctgctgttc caggccttac 200
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 cgacctgtgc caccaactcg cactcagact ctgaactcag acctgaaatc 300
 ttctcttcac gggaggcttg gcagtttttc ttactcctgt ggtctccaga 350
 tttcaggcct aagatgaaag cctctagtct tgccttcagc cttctctctg 400
 ctgcgtttta tctcctatgg actccttcca ctggactgaa gacactcaat 450
 ttgggaagct gtgtgatcgc cacaaacctt caggaaatac gaaatggatt 500
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 gaatcttaag gaggactgag tctttgcaag acacaaagcc tgcgaatcga 600
 tgctgcctcc tgcgccattt gctaagactc tatctggaca gggtatttaa 650
 aaactaccag acccetgace attatactet eeggaagate ageageeteg 700
 ccaatteett tettaceate aagaaggace teeggetete teatgeceae 750
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<210> 402 <211> 261 <212> PRT

<213> Homo sapiens

<400> 402

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Ser Phe Ser Ile Tyr Ser Leu Gln Val Pro Ala Val Pro Gly Leu 20 25 30

Thr Cys Trp Ala Leu Thr Ala Glu Pro Gly Trp Gly Gln Asn Lys
35 40 45

Gly Ala Thr Thr Cys Ala Thr Asn Ser His Ser Asp Ser Glu Leu
50 55 60

Arg Pro Glu Ile Phe Ser Ser Arg Glu Ala Trp Gln Phe Phe Leu
65 70 75

Leu Leu Trp Ser Pro Asp Phe Arg Pro Lys Met Lys Ala Ser Ser 80 85

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Leu Ala Phe Ser Leu Leu Ser Ala Ala Phe Tyr Leu Leu Trp Thr
                  95
                                     100
 Pro Ser Thr Gly Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile
Ala Thr Asn Leu Gln Glu Ile Arg Asn Gly Phe Ser Glu Ile Arg
 Gly Ser Val Gln Ala Lys Asp Gly Asn Ile Asp Ile Arg Ile Leu
Arg Arg Thr Glu Ser Leu Gln Asp Thr Lys Pro Ala Asn Arg Cys
 Cys Leu Leu Arg His Leu Leu Arg Leu Tyr Leu Asp Arg Val Phe
Lys Asn Tyr Gln Thr Pro Asp His Tyr Thr Leu Arg Lys Ile Ser
 Ser Leu Ala Asn Ser Phe Leu Thr Ile Lys Lys Asp Leu Arg Leu
                 200
 Ser His Ala His Met Thr Cys His Cys Gly Glu Glu Ala Met Lys
                 215
Lys Tyr Ser Gln Ile Leu Ser His Phe Glu Lys Leu Glu Pro Gln
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Ala Ala Val Val Lys Ala Leu Gly Glu Leu Asp Ile Leu Leu Gln
Trp Met Glu Glu Thr Glu
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<210> 403
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<400> 403
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<210> 404
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<222> 1-26
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 ggagacggtg caagagaatc tgccccctat aggggaatgg tgcgcacagc 250
 cctagggatc attgaagagg aaggctttct aaagctttgg caaggagtga 300
 caccegecat ttacagacae gtagtgtatt etggaggteg aatggteaca 350
 tatgaacatc tccgagaggt tgtgtttggc aaaagtgaag atgagcatta 400
 tcccctttgg aaatcagtca ttggagggat gatggctggt gttattggcc 450
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 ggacaatatc atgactcacg gtttatcaag tttatgttct ggactggtag 750
 cttctattct gggaacacca gccgatgtca tcaaaagcag aataatgaat 800
 caaccacgag ataaacaagg aaggggactt ttgtataaat catcgactga 850
 ctgcttgatt caggctgttc aaggtgaagg attcatgagt ctatataaag 900
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<210> 406
<211> 323
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<213> Homo sapiens
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Met Ser Val Pro Glu Glu Glu Glu Arg Leu Leu Pro Leu Thr Gln
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Arg Trp Pro Arg Ala Ser Lys Phe Leu Leu Ser Gly Cys Ala Ala Thr Val Ala Glu Leu Ala Thr Phe Pro Leu Asp Leu Thr Lys Thr Arg Leu Gln Met Gln Gly Glu Ala Ala Leu Ala Arg Leu Gly Asp Gly Ala Arg Glu Ser Ala Pro Tyr Arg Gly Met Val Arg Thr Ala Leu Gly Ile Ile Glu Glu Glu Gly Phe Leu Lys Leu Trp Gln Gly Val Thr Pro Ala Ile Tyr Arg His Val Val Tyr Ser Gly Gly Arg Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly Lys Ser 110 Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met 125 Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu 140 Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly 155 Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile 170 Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr 200 Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu 230 Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr 260 Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met 290 Thr Pro Trp Ser Met Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg 310

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<211> 31

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<213> Artificial

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<222> 1-31

<223> Synthetic construct.

<400> 407

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<210> 408

<211> 34

<212> DNA

<213> Artificial

<220>

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<222> 1-34

<223> Synthetic construct.

<400> 408

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<210> 409

<211> 1487

<212> DNA

<213> Homo sapiens

<400> 409

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cagcatttaa tgaaaaattt atgcttaaga agtaaaaatg gcaggcttcc 150

tagataattt tcgttggcca gaatgtgaat gtattgactg gagtgagaga 200

agaaatgctg tggcatctgt tgtcgcaggt atattgtttt ttacaggctg 250

gtggataatg attgatgcag ctgtggtgta tcctaagcca gaacagttga 300

accatgcctt tcacacatgt ggtgtatttt ccacattggc tttcttcatg 350

ataaatgctg tatccaatgc tcaggtgaga ggtgatagct atgaaagcgg 400

ctgtttagga agaacaggtg ctcgagtttg gcttttcatt ggtttcatgt 450

tgatgtttgg gtcacttatt gcttccatgt ggattctttt tggtgcatat 500

gttacccaaa atactgatgt ttatccggga ctagctgtgt tttttcaaaa 550

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<210> 410

<211> 158

<212> PRT

<213> Homo sapiens

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Ile Asp Trp Ser Glu Arg Arg Asn Ala Val Ala Ser Val Val Ala 20 25 30

Gly Ile Leu Phe Phe Thr Gly Trp Trp Ile Met Ile Asp Ala Ala 35 40 45

Val Val Tyr Pro Lys Pro Glu Gln Leu Asn His Ala Phe His Thr 50 55 60

Cys Gly Val Phe Ser Thr Leu Ala Phe Phe Met Ile Asn Ala Val 65 70 75

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Ser Asn Ala Gln Val Arg Gly Asp Ser Tyr Glu Ser Gly Cys Leu
 Gly Arg Thr Gly Ala Arg Val Trp Leu Phe Ile Gly Phe Met Leu
 Met Phe Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Ala
 Tyr Val Thr Gln Asn Thr Asp Val Tyr Pro Gly Leu Ala Val Phe
 Phe Gln Asn Ala Leu Ile Phe Phe Ser Thr Leu Ile Tyr Lys Phe
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 Gly Arg Thr Glu Glu Leu Trp Thr
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<222> 1-20
<223> Synthetic construct.
<400> 412
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<210> 413
<211> 40
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<222> 1-40
<223> Synthetic construct.
<400> 413
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<211> 1337 <212> DNA <213> Homo sapiens

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<211> 224
<212> PRT
<213> Homo sapiens
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 Ile Val Thr Trp Met Phe Ile Arg Ser Tyr Met Ser Phe Ser
Met Lys Thr Ile Arg Leu Pro Arg Trp Leu Ala Ala Ser Pro Thr
Lys Glu Ile Gln Val Lys Lys Tyr Lys Cys Gly Leu Ile Lys Pro
 Cys Pro Ala Asn Tyr Phe Ala Phe Lys Ile Cys Ser Gly Ala Ala
Asn Val Val Gly Pro Thr Met Cys Phe Glu Asp Arg Met Ile Met
 Ser Pro Val Lys Asn Asn Val Gly Arg Gly Leu Asn Ile Ala Leu
 Val Asn Gly Thr Thr Gly Ala Val Leu Gly Gln Lys Ala Phe Asp
                 110
 Met Tyr Ser Gly Asp Val Met His Leu Val Lys Phe Leu Lys Glu
                                     130
                 125
 Ile Pro Gly Gly Ala Leu Val Leu Val Ala Ser Tyr Asp Asp Pro
                 140
 Gly Thr Lys Met Asn Asp Glu Ser Arg Lys Leu Phe Ser Asp Leu
                 155
 Gly Ser Ser Tyr Ala Lys Gln Leu Gly Phe Arg Asp Ser Trp Val
                 170
 Phe Ile Gly Ala Lys Asp Leu Arg Gly Lys Ser Pro Phe Glu Gln
                 185
 Phe Leu Lys Asn Ser Pro Asp Thr Asn Lys Tyr Glu Gly Trp Pro
                 200
 Glu Leu Leu Glu Met Glu Gly Cys Met Pro Pro Lys Pro Phe
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<210> 416
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<221> Artificial Sequence

<222> 1-21 <223> Synthetic construct. <400> 416 gccatagtca cgacatggat g 21 <210> 417 <211> 18 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-18 <223> Synthetic construct. <400> 417 ggatggccag agctgctg 18 <210> 418 <211> 26 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-26 <223> Synthetic construct. <400> 418 aaagtacaag tgtggcctca tcaagc 26 <210> 419 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 419 tctgactcct aagtcaggca ggag 24 <210> 420 <211> 24 <212> DNA <213> Artificial <220> <221> Artificial Sequence <222> 1-24 <223> Synthetic construct. <400> 420 attctctcca cagacagctg gttc 24

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<210> 421
<211> 46
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<222> 1-46
<223> Synthetic construct.
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<210> 422
<211> 1701
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> 1528
<223> unknown base
<400> 422
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 tgtcctgggg atccagaaac ccatgatacc ctactgaaca ccgaatcccc 100
 tggaagccca cagagacaga gacagcaaga gaagcagaga taaatacact 150
 cacgccagga gctcgctcgc tctctctct tctctctcac tcctccctcc 200
 ctctctctct gcctgtccta gtcctctagt cctcaaattc ccagtcccct 250
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 cactggggtc agaaaggatc cccagggggg tcagaacacc agatcaacag 650
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 ggcatcctaa ttgaggtggg tgagactaag aatatagctt atgaacacat 800
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tctgagtcac ttgcatgaag tcaggcataa agatcagaag acctcagtgc 850

ctcccttcaa cctaagagag ctgctcccca aacagctggg gcagtacttc 900 cgctacaatg gctcgctcac aactccccct tgctaccaga gtgtgctctg 950 gacagttttt tatagaaggt cccagatttc aatggaacag ctggaaaagc 1000 ttcaggggac attgttctcc acagaagagg agccctctaa gcttctggta 1050 cagaactacc gagcccttca gcctctcaat cagcgcatgg tctttgcttc 1100 tttcatccaa gcaggatcct cgtataccac aggtgaaatg ctgagtctag 1150 gtgtaggaat cttggttggc tgtctctgcc ttctcctggc tgtttatttc 1200 attgctagaa agattcggaa gaagaggctg gaaaaccgaa agagtgtggt 1250 cttcacctca gcacaagcca cgactgaggc ataaattcct tctcagatac 1300 catggatgtg gatgacttcc cttcatgcct atcaggaagc ctctaaaatg 1350 gggtgtagga tctggccaga aacactgtag gagtagtaag cagatgtcct 1400 cettecectg gacatetett agagaggaat ggacceagge tgteatteea 1450 ggaagaactg cagageette ageeteteea aacatgtagg aggaaatgag 1500 gaaatcgctg tgttgttaat gcagaganca aactctgttt agttgcaggg 1550 gaagtttggg atatacccca aagtcctcta ccccctcact tttatggccc 1600 tttccctaga tatactgcgg gatctctcct taggataaag agttgctgtt 1650 qaaqttqtat atttttqatc aatatatttg gaaattaaag tttctgactt 1700 t 1701

<210> 423 <211> 337 <212> PRT

<213> Homo sapiens

<400> 423

Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala

Ala Asp Gly Gly Gln His Trp Thr Tyr Glu Gly Pro His Gly Gln

Asp His Trp Pro Ala Ser Tyr Pro Glu Cys Gly Asn Asn Ala Gln

Ser Pro Ile Asp Ile Gln Thr Asp Ser Val Thr Phe Asp Pro Asp

Leu Pro Ala Leu Gln Pro His Gly Tyr Asp Gln Pro Gly Thr Glu 65

Pro Leu Asp Leu His Asn Asn Gly His Thr Val Gln Leu Ser Leu

80 85 90

Pro Ser Thr Leu Tyr Leu Gly Gly Leu Pro Arg Lys Tyr Val Ala 95 100 105

Ala Gln Leu His Leu His Trp Gly Gln Lys Gly Ser Pro Gly Gly 110 115 120

Ser Glu His Gln Ile Asn Ser Glu Ala Thr Phe Ala Glu Leu His 125 130 135

Ile Val His Tyr Asp Ser Asp Ser Tyr Asp Ser Leu Ser Glu Ala 140 145 150

Ala Glu Arg Pro Gln Gly Leu Ala Val Leu Gly Ile Leu Ile Glu 155 160 165

Val Gly Glu Thr Lys Asn Ile Ala Tyr Glu His Ile Leu Ser His 170 175 180

Leu His Glu Val Arg His Lys Asp Gln Lys Thr Ser Val Pro Pro 185 190 190

Phe Asn Leu Arg Glu Leu Leu Pro Lys Gln Leu Gly Gln Tyr Phe 200 205 210

Arg Tyr Asn Gly Ser Leu Thr Thr Pro Pro Cys Tyr Gln Ser Val 215 220 225

Leu Trp Thr Val Phe Tyr Arg Arg Ser Gln Ile Ser Met Glu Gln 230 235 240

Leu Glu Lys Leu Gln Gly Thr Leu Phe Ser Thr Glu Glu Glu Pro 245 250 255

Ser Lys Leu Leu Val Gln Asn Tyr Arg Ala Leu Gln Pro Leu Asn 260 265 270

Gln Arg Met Val Phe Ala Ser Phe Ile Gln Ala Gly Ser Ser Tyr 275 280 285

Thr Thr Gly Glu Met Leu Ser Leu Gly Val Gly Ile Leu Val Gly 290 295 300

Cys Leu Cys Leu Leu Leu Ala Val Tyr Phe Ile Ala Arg Lys Ile 305 310 315

Arg Lys Lys Arg Leu Glu Asn Arg Lys Ser Val Val Phe Thr Ser 320 325 330

Ala Gln Ala Thr Thr Glu Ala 335

<210> 424

<211> 18

<212> DNA

<213> Artificial

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<223> Synthetic construct.
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<210> 425
<211> 18
<212> DNA
<213> Artificial
<220>
<221> Artificial Sequence
<222> 1-18
<223> Synthetic construct.
<400> 425
cccgatctgc ctgctgta 18
<210> 426
<211> 24
<212> DNA
<213> Artificial
<220>
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<222> 1-24
<223> Synthetic construct.
<400> 426
ctgcactgta tggccattat tgtg 24
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<222> 1-45
<223> Synthetic construct.
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<210> 428
<211> 1073
<212> DNA
<213> Homo sapiens
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<210> 429

<211> 209

<212> PRT

<213> Homo sapiens

<400> 429

Met Arg Ser Thr Ile Leu Leu Phe Cys Leu Leu Gly Ser Thr Arg
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Ser Leu Pro Gln Leu Lys Pro Ala Leu Gly Leu Pro Pro Thr Lys 20 25 30

Leu Ala Pro Asp Gln Gly Thr Leu Pro Asn Gln Gln Gln Ser Asn 35 40 45

Gln Val Phe Pro Ser Leu Ser Leu Ile Pro Leu Thr Gln Met Leu 50 55 60

Thr Leu Gly Pro Asp Leu His Leu Leu Asn Pro Ala Ala Gly Met
65 70 75

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Thr Pro Gly Thr Gln Thr His Pro Leu Thr Leu Gly Gly Leu Asn 90

Val Gln Gln Gln Leu His Pro His Val Leu Pro Ile Phe Val Thr 105

Gln Leu Gly Ala Gln Gly Thr Ile Leu Ser Ser Glu Glu Leu Pro 120

Gln Ile Phe Thr Ser Leu Ile Ile His Ser Leu Phe Pro Gly Gly 135

Ile Leu Pro Thr Ser Gln Ala Gly Ala Asn Pro Asp Val Gln Asp 145

Gly Ser Leu Pro Ala Gly Arg Leu Pro Thr Pro Ser Gly Thr Asp Asp 180

Asp Phe Ala Val Thr Thr Pro Ala Gly Ile Gln Arg Ser Thr His 195
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Ala Ile Glu Glu Ala Thr Thr Glu Ser Ala Asn Gly Ile Gln

<210> 430 <211> 1257 <212> DNA

<213> Homo Sapien

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ccgcctccag ctccgcgctg cccggcagcc gggagccatg cgaccccagg 150
gccccgccgc ctccccgcag cggctccgcg gcctcctgct gctcctgctg 200
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<210> 431 <211> 243 <212> PRT

<213> Homo Sapien

<400> 431

Met Arg Pro Gln Gly Pro Ala Ala Ser Pro Gln Arg Leu Arg Gly
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Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala 20 25 30

Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg 35 40 45

Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala 50 55 60

Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro
65 70 75

Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys 80 85 90

Gly Glu Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn 95 100 105

Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu 110 115 120

Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asn Ser 125 130 135

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Ala Leu Arg Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg
                 140
 Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe Asn Gly Ala Glu
                 155
                                     160
 Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Gln
 Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser
                 185
 Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp
 Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp
 Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu
                 230
 Leu Pro Lys
<210> 432
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<212> DNA
<213> Artificial Sequence
<220>
<223> Artificial Sequence
<400> 432
aggacttgcc ctcaggaa 18
<210> 433
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 433
cgcaggacag ttgtgaaaat a 21
<210> 434
<211> 21
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 434
atgacgctcg tccaaggcca c 21
<210> 435
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<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 435
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<400> 438
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<210> 439
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<223> Synthetic oligonucleotide probe
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